2022
AIRLINE DIGITAL OPTIMIZATION YEARBOOK

Airline industry insights for a higher conversion rate and better user experience

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ABOUT THE AUTHOR

Iztok Franko is passionate about digital marketing and e-commerce. He has more than 10 years of experience as a CMO and CIO in airline, travel and multinational companies. He currently works as a strategic digital marketing and ecommerce consultant for global airline and travel brands.

Through practicing true data-driven digital marketing, testing several ecommerce processes and experimenting with different team management approaches, he has established a conversion optimization framework that works.

Iztok also regularly writes and speaks about travel and airline marketing, ecommerce, conversion optimization and ancillary topics.

He is the founder of diggintravel.com, a content platform for smarter travel marketing.

ABOUT DIGGINTRAVEL

Diggintravel is a content platform, designed for airline ecommerce and digital marketing professionals.

Diggintravel was built to help digital marketers in the travel industry, especially airline professionals who run and manage online sales.

We provide in-depth insights and research on airline ecommerce and digital marketing. Diggintravel specialzies in airline conversion rate optimization and ancillary revenue disciplines and by combining both helps airlines become true digital retailers.

If you are an airline looking to grow your online sales; we can help you with tailor-made workshop for airlines, advanced analytics designed for airline booking funnel and conversion optimization consulting services.
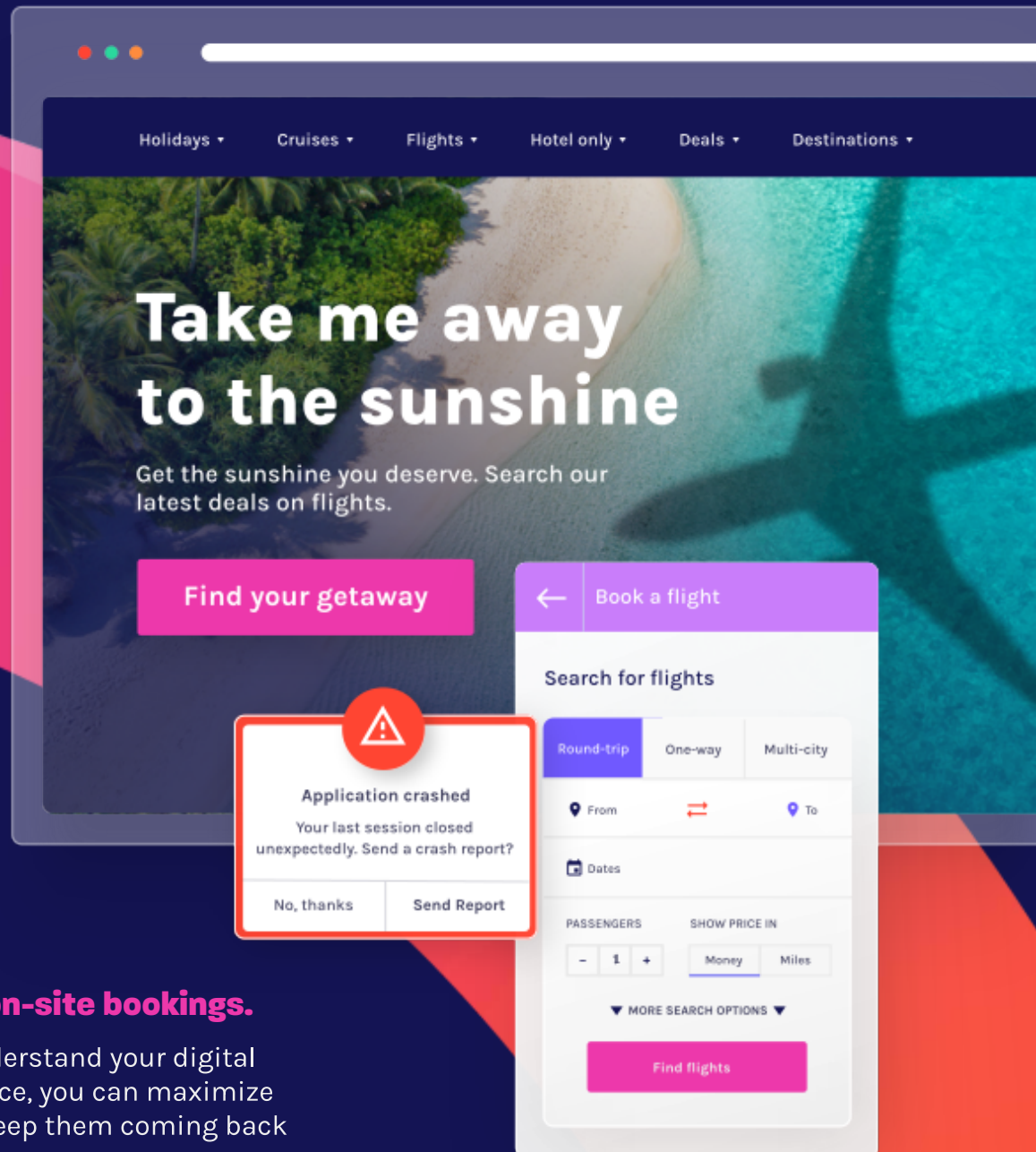
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ABOUT THE SPONSOR

Glassbox empowers organizations to create frictionless digital journeys for their customers. Our digital experience analytics platform works in real time across mobile apps and websites to accelerate loyalty and growth. Through AI-driven visualization and analytics tools, Glassbox helps teams to prioritize customer experience and digital product enhancements from a single collaborative system.

Teams across the organization, from IT and product management to marketing and compliance, can understand user struggles, visualize the customer journey and optimize every step. Hundreds of enterprises across multiple industries choose Glassbox for easy, secure and private cloud-based deployments.

THE FOLLOWING EXPERTS PROVIDED INSIGHTS FOR THIS YEARBOOK:

During our research, we conducted several in-depth interviews with various digital leaders on our Diggintravel Podcast. Key interview highlights and experts' insights are provided in our detailed survey results chapters in the special "Ask the Expert" sections. Full audio podcast interviews are available on the Diggintravel Blog and Diggintravel Podcast websites.

LUKAS VERMEER
Experimentation Leader, Director of Experimentation at Vista, previously Director of Experimentation at Booking.com (2019-2021)

Lukas is an experienced experimentation practitioner. His specialty is designing and building the infrastructure and processes required to start and scale A/B testing to drive business growth. Lukas combines industry experience in online experimentation and data science with an academic background in computing science and machine learning. For 8 years, he was responsible for A/B testing at Booking.com, the widely acknowledged leader in the field of online experimentation. He grew the Booking.com in-house experimentation team from 4 to 30 people, and became the first Director of Experimentation in the company.

BEN LABAY
Experimentation Expert, Managing Director of CRO and Experimentation at Speero by CXL

Ben is a Managing Director at Speero by CXL, a speaker on all things research and experimentation, an artist, and a conservation science consultant. He's done 10+ years in academia and conservation science, and 5+ years working in the marketing and digital industries.

GREG DOWLING
Global Director of Business Insights at Glassbox

Greg is a highly technical and data-driven analytics change agent, trusted advisor, and effective leader delivering actionable insights through data and creative storytelling. Greg has over 25 years' experience leading diverse, cross-functional, analytical, creative and technical development organizations, and over 20 years' direct internet experience in digital analytics, usability, ecommerce, and product management.

ESAMATTI VUOLLE
Business Director at Eezy, previously Head of Digital Commerce at Finnair (2018-2021)

Esamatti is an innovative senior executive with an illustrious track record of impact in digital sales, marketing, customer engagement and experience. At Finnair, Esamatti directed digital sales, marketing, self-service and customer engagement strategy to incorporate digital enhancements. He tailored robust direct selling and servicing programs and products in ecommerce, online self-service, mobile applications and in-flight entertainment.

AMANDA STOCKWELL
UX Research Expert, LinkedIn Teacher, and Diggintravel Airline Digital Academy Instructor

Amanda has been doing user experience research and strategy since 2008. She has worked with Fortune 100s, startups, and everything in between, providing everything from interaction design to market research. Amanda believes that gaining a thorough understanding of the people who use what we build is the foundation for every component of a successful business: design and experience, marketing strategy, hiring, product strategy, sales, everything.

JOE SINCLAIR
Senior Digital Analyst at Air New Zealand

Joe is an experienced digital analytics professional driven by providing actionable, customer-centric insights to influence strategy and positive change. At Air New Zealand, Joe is a Senior Team Lead for digital analytics, including the public website, online booking (ecommerce) and booking portfolios.

REMUS MORARU
Senior Ecommerce Manager at Wizz Air

Remus is an ecommerce and product management professional focused on optimizing the website, mobile app conversion rate and user experience through continuous innovation to create a seamless experience. At Wizz Air, Remus is leading high-efficiency web and app product teams and a CRO team.

DIEGO BRUNOT
Lead Design Researcher at Walmart, previously UX Lead at American Airlines (2019-2021)

Better understanding users is the mission that brought Diego to three different organizations (Operations, Digital and IT), across two continents (Europe, America) and three countries (Ireland, UK, USA) while working at American Airlines. It also led Diego to behavioral science. On this journey, he learned the power of empathy. He found out that focusing on questions is an unmissable step to problem-solving.

LILIANA GARCÍA MAGAÑA
Business Intelligence and Analytics at VivaAerobus

Ever since Liliana was a kid, math, numbers and analytical thinking have been her passion. Later, she discovered the art and potential of transforming numbers and observations into databases and, thus, defined her career's vision: to drive business decisions by connecting business understanding, data handling, data visualization, coding and quantitative methods – statistics, econometrics and data mining.

WHERE'S WHAT

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INTRODUCTION

4TH AIRLINE DIGITAL OPTIMIZATION SURVEY AND RESEARCH

AUTHOR'S NOTE

We published our last Airline Digital Optimization Yearbook in February 2020, just as the COVID pandemic started to unfold. At that time nobody imagined the extent to which it would impact our everyday lives and our industry or how long it would last. Because the start of the pandemic was at the forefront of all news and major developments, the last two years have kind of felt like one very long year. This is why we decided to wait to conduct another airline digital optimization survey and to publish the new Yearbook in early 2022.

Over the last two years, the airline industry has taken a big step back. There probably isn't a single number or KPI that looks better now than it did at the peak in 2019. The number of flights, passengers, and airline fleet sizes have all declined because of the major drop in demand and unpredictable global environment. The goal of our research is to assess airline digital maturity, so a big part of our 2022 research was to evaluate what happened there during this period of turmoil. We wanted to see how large a step back airlines had to take in the area of digital optimization because of the downsizing.

Through this Yearbook, you'll be able to see in detail what happened to maturity for each of our eight key digital optimization areas. Even though the survey is based on self-assessment and the list of airlines in the survey is not the same as in 2020, it is evident that airline digital maturity did take a hit during the last two years. Many airlines had to reduce the size of their digital teams (you can find survey results for this at the end of Part I of this Yearbook). Smaller teams mean less specialized people, knowledge and skills needed

for digital optimization. Smaller budgets resulted in less specialized tools, less detailed analytics, fewer user & UX research activities, and fewer experiments being run. Which is unfortunate, because a smart, data-driven approach to decision-making should be even more important during times when airlines cannot afford to take uncalculated risks. And digital optimization and CRO (conversion rate optimization) are the best tools for de-risking ideas when it comes to your airline digital product.

Stefan Thomke, innovation and experimentation leader, and our past research contributor, advises companies to assign budgets for experimentation even during tough times like the current pandemic. Here is a quote from his article, "Building a Culture of Experimentation":

"To successfully innovate, companies need to make experimentation an integral part of everyday life—even when budgets are tight. That means creating an environment where employees' curiosity is nurtured, data trumps opinion, anyone (not just people in R&D) can conduct or commission a test, all experiments are done ethically, and managers embrace a new model of leadership."

Enjoy this yearbook!
Iztok

WILL 2022 BE THE YEAR FOR DIGITAL RECOVERY AND SMARTER DIGITAL MARKETING?

The pandemic accelerated the shift towards digital, touchless self-service. Ecommerce sales skyrocketed, and new customer segments that had been reluctant to do online shopping pre-pandemic are now comfortable doing so. The good news is – as you'll see in the next chapter – that many airlines have recognized that the pandemic is an opportunity to strengthen their digital channels and accelerate their digital transformation initiatives.

But our survey shows that now, fewer airlines see systematic digital optimization and experimentation as the key part of digital transformation. Because we as an industry have lost some of our best digital talent, there is a knowledge gap and lack of understanding about how modern digital products are built. Here at Diggintravel, we've been preaching for years that experimentation and CRO are a systematic, scientific, data-driven approach to managing your ecommerce and your digital products. Or, as contributor to this Yearbook and experimentation thought leader **Ben Labay** puts it, CRO is a tool used to make faster, more accurate decisions.

"When I have conversations around how this applies more broadly to marketers or how this can transition out of the niche realm and into the more general zeitgeist of business operations, experimentation/CRO is all about decision optimization. It's a tool used to have faster, more accurate decisions. The goal is not growth. The goal is adaptability. As the market changes, as the environment changes, how can we position ourselves to take advantage or be positioned and not be stuck

flatfooted, considering the market and environmental changes?
Experimentation can be and should be looked at as a tool for creating decision optimization and also for culturally pushing decisions down the organizational ladder, pushing it down into product owners as opposed to decisions being stuck in the top and stuck in the C-suite and stuck in leadership. It's a tool that leadership is starting to embrace more and more as an operating model to comfortably push decision-making, and strategic decision-making, even, down into product owners."

Our 2022 survey shows that because of the limited resources, airlines had to do less digital optimization, less CRO and experimentation, and therefore less smart digital marketing. We hope that when airlines start to recover and rebuild their digital capabilities, digital optimization doesn't get left out. Some airlines have already started rebuilding their digital teams, as we've seen an influx of new digital jobs on our Diggintravel Airline Digital Job Board. **As you can see in the last section of this Yearbook (Section VIII. Organizational Support), smart companies and forward-thinking airlines are leveraging experimentation and smart, data-driven marketing to attract the best digital talent**. The best digital experts want to be empowered to make decisions and build new innovative digital solutions. If airlines are serious about digital transformation, building a modern working environment is a must.

Let's make 2022 the year of smarter digital marketing.

AIRLINES' VIEW: FOCUS ON DIGITAL CHANNELS DURING THE PANDEMIC

First, let me say thank you to all 52 airline digital leaders who participated in this project and survey. Without you, this yearbook would not be possible, so THANK YOU FOR YOUR SUPPORT!

Here are additional views from three leaders of legacy full-service airlines, demonstrating their focus on digital during the pandemic. There were other airlines in our survey who stated that they are implementing new digital platforms and booking engines and developing new digital products that reduce friction.

AMIT SAGI

Chief Digital Officer and Chief Marketing Officer at EL AL Israel Airlines

"In the past year, we saw a massive increase in direct online bookings, and even though the numbers of passengers did not reach 2019 numbers, online bookings were higher than 2019 numbers.
How did we achieve that? There are two main drivers: On the customer side, we saw a shift from booking with travel agents to booking directly with EL AL. The shift was mainly from non-branded OTAs. On the EL AL side, we invested heavily in increasing confidence for customers to book directly and online. We added travel and COVID insurance to our offering, we created flexible changes and a cancellation policy with the ability to cancel or change tickets online, and we changed the online check-in process by adding a health document pre-check. We emphasized that there is someone to talk to via the Customer Service Center and we are available for

customers via many platforms: WhatsApp, Facebook and Facebook Messenger, phone call, email, etc. – being accessible to customers in any way they wished to communicate with us. To enhance confidence in flying and increase demand, we also invested in creating content, mainly on social media, with local influencers showing what is open and the situation in each destination we fly. The message was 'It's time to get excited again and fly around the world.' Unfortunately, things are not stable yet. This is not a 'new normal' because it is not normal at all. We are using this time to improve our digital customer journey– making sure we are ready to harvest the demand."

ALEKSANDAR BOSKOVIC

Ecommerce Development Manager at Air Serbia

"Having in mind COVID-19 obstacles and a slow but efficient recovery of the airline market, Air Serbia has been able to grow its direct online share to an average of more than 45% in total sales in 2021, whilst some months have gone over 50%, and this is a trendline we plan to continue. We've focused on developing a custom online booking engine on our mobile app, currently available in RSD currency in Serbia, as we are testing some more features with an aim to release it soon for all users on all currencies.

Our next phase is to move that IBE from mobile app to desktop, whilst at the same time we are working on a new website.
We are continuously working on improving user experience as we plan a CDP and chatbot integration, which is in line with our ecomm strategy 2020-2023 of having personalized offers to our targeted markets. We hope to fully digitalize a majority of services at Air Serbia and provide a simultaneous sense on all user touchpoints by having a true omni-channel experience, as we firmly believe this will boost our online direct sales even more."

UMESH CHHIBER
Senior Vice President, Revenue Management, Pricing and Distribution at Oman Air

"For the past two years, during COVID-19, one positive outcome has been the digitalization of most processes. Digital awareness and online payments are now viewed as having greater value worldwide, and most airlines have seen a significant jump in online value and a customer-centric approach. Oman Air is working diligently to enhance direct channels, increase our direct exclusive service, and incorporate guest-centric travel options into our website, mobile and NDC channels. We want our customers to have the best-in-class service throughout our network.

As a full-service airline, risk is calculated at every step in the journey and takes into account the sensitivity of our guest segments in the geographical areas we serve. Not only are our digital retailing goals generating more revenues and lowering costs, they present an opportunity for repeat business while

enhancing the overall experience for new guests. We have started building a beautiful house of retailing, with pillars of 'customer centricity' and a 'five-star product.' Oman Air is on a transitional journey from 'transport-only airline' to 'travel retailer' serving the travel needs of our guests from A to Z."

ABOUT THE SURVEY

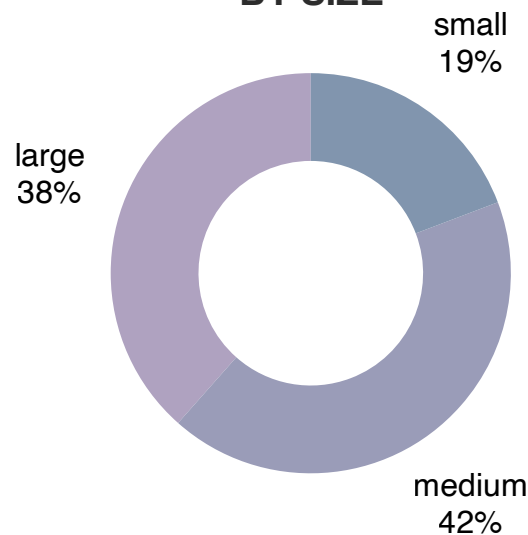# ABOUT THE 2022 AIRLINE DIGITAL OPTIMIZATION SURVEY

The Diggintravel 2022 Airline Digital Optimization Survey is the fourth survey and benchmark of digital optimization in the airline industry.

Going into the fourth year of our evaluation, this survey will provide you the overview and evolution of this exciting ecommerce discipline. This survey certainly won't be the last, as Diggintravel will continue following digital optimization developments and airline ecommerce trends. Every year, the survey has evolved as we continue to develop our maturity model and our digital optimization questionnaire. The 2022 survey is especially important since we wanted to evaluate and measure the impact of the COVID-19 pandemic on airline digital teams and optimization practices.
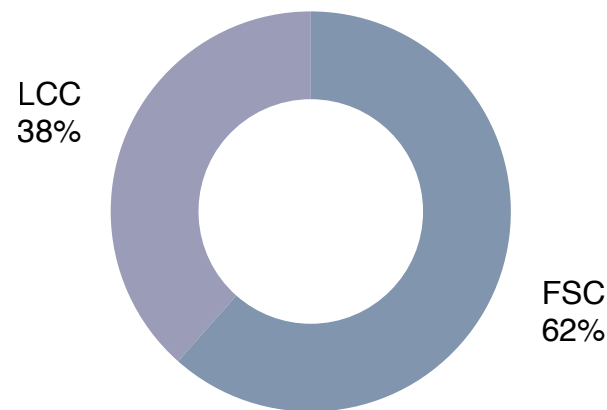
The survey investigates the maturity of digital optimization processes and key challenges airline professionals face in their digital and conversion optimization efforts. During the last quarter of 2021, our survey questionnaire was sent to more than 100 senior airline ecommerce, digital optimization and digital marketing executives.

The survey represents the views and insights **of 52 carriers** (a 6% increase from last year's turnout, where 49 airlines participated). The survey will provide you with intriguing insights into the state and development of digital optimization for the airline industry.
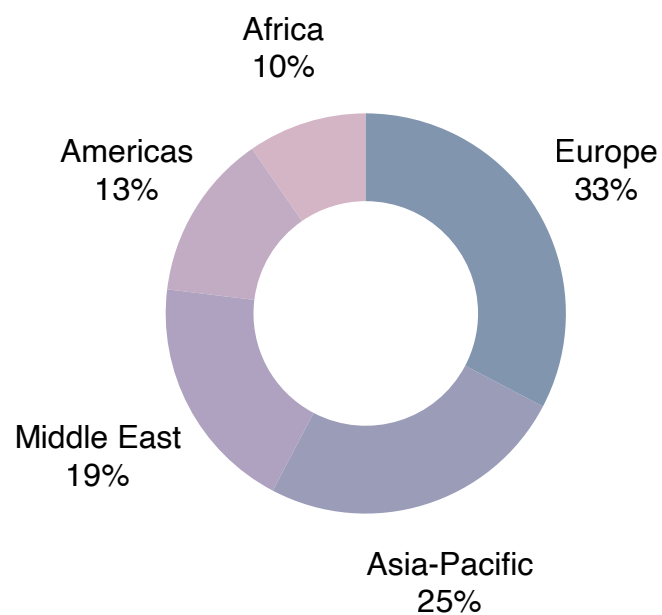
BY SIZE

- small 19%
- medium 42%
- large 38%

BY TYPE

- LCC 38%
- FSC 62%

BY GEOGRAPHY

- Africa 10%
- Americas 13%
- Middle East 19%
- Asia-Pacific 25%
- Europe 33%

AIRLINE DIGITAL OPTIMIZATION MATURITY MODEL

WHAT WERE WE ASKING?

The goal of the survey was to evaluate digital optimization maturity within airline organizations.

For evaluation of maturity, we evaluated several digital optimization maturity models and revised last year's Diggintravel Airline Digital Optimization Maturity Model.

The new and **revised Diggintravel Airline Digital Optimization Maturity Model** consists of 8 areas:

- 7 general digital optimization areas: people, skills, analytics, user and UX research (revised area), test quantity, tools, organizational support
- 1 airline-specific area: internet booking engine (IBE)

You can see the exact questions and results for each area in the special section at the end of this report.

Each area was ranked from Level 1 (basic) to Level 5 (most advanced).

We also added new questions to evaluate the maturity of the digital optimization processes in addition to the 8 questions by area. These were the new questions added to the questionnaire:

Does your team follow a process for conversion optimization?
Does CRO and digital optimization have its own budget?
How are experiment results and learnings implemented and shared across the organization?

Based on the answers to the additional maturity questions, the final maturity score was adjusted.

As a result, we created the **2022 Airline Digital Optimization Maturity Model** (see next section).

Since personalization is a hot topic and we believe it is closely connected to digital optimization and CRO (conversion optimization), we evaluated whether airlines are combining conversion rate optimization and personalization activities and what kind of personalization engines they're using.

Additionally, we asked each participant about the key challenge that prevents them from taking digital optimization to the next level.

THE DIGGINTRAVEL AIRLINE DIGITAL OPTIMIZATION MATURITY MODEL

The best airlines know that digital optimization is not a set of "hacks", that CRO is not just about A/B testing your landing pages or new features. Digital optimization is a process; it's about building a data-driven culture and an organization that supports experimentation. What's more, the best companies take experimentation beyond just the digital space. They recognize that experimentation enables data-driven decision-making, which makes your products better. Per experimentation leader and our contributor Lukas Vermeer:

"Often when people talk about experimentation, they're talking about A/B testing, but the definition of an experiment is that you change something with an expectation of what's going to happen. That is the simple definition of an experiment, and that is essentially **product development."**

The goal of the **Diggintravel Airline Digital Optimization Maturity Model** is to help airlines evaluate the level of their digital optimization process in each of the key areas. The Maturity Model also helps airlines strategically plan actions needed to advance their digital optimization process in each area. Progress in most cases is an evolution (step-by-step advancement) and rarely a revolution (skipping steps in the maturity model). Finally, the Maturity Model is also a tool for self-assessment, allowing airlines to realistically assess their real digital optimization and ecommerce competence. In a lot of cases, there is an organizational belief that the airline's ecommerce and digital optimization competence is at a higher level than it actually is. Only when we do a systematic evaluation of each area (especially user research activities in place and quantity of tests) do we usually get a realistic picture.

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
PEOPLE	Online marketing specialist	Ad-hoc or part-time conversion optimization resource	Full-time conversion optimization resource (CRO specialist)	**Small digital optimization team:** (product owner, web analyst, designer, developer, CRO specialist)	**Full-scale digital optimization team** (in addition to the small team - UX researcher, copywriter, front-end, back-end developer), or several optimization teams
DIGITAL OPTIMIZATION & CRO SKILLS	Basic online and digital marketing knowledge	Basic conversion optimization knowledge, UX and analytics basics	Deeper knowledge about conversion optimization: CRO, UX, analytics, A/B testing, content & copywriting	**Advanced CRO knowledge:** Level 3 + UX excellence, user behavioral knowledge, advanced analytics including segmentation	**Experts in conversion optimization:** Level 4 + conversion-centered design, analytics experts, testing automation, personalization
USER AND UX RESEARCH	Basic analytics and conversion reports; sales reports	Level 1 + advanced analytics reports, session recordings, simple A/B testing, heat maps and click maps, ad-hoc customer surveys	Level 2 + regular customer feedback and survey analysis, form analysis, occasional unmoderated or moderated user testing	Level 3 + scheduled and planed moderated and unmoderated user testing, customer struggle scores, prototype testing	Level 4 + user testing at scale, eye tracking, biometric research, anomaly detection leveraging AI/ML
DIGITAL ANALYTICS	Basic web analytics (e.g. standard Google Analytics reports)	Level 1 + advanced web analytics setup (e.g. Enhanced ECommerce for GA, custom goals, events, metrics, and simple funnel reports)	Level 2 + detailed digital analytics in primary analytics tool: funnel analysis, attribution modeling, cross-device tracking	Level 3 + advanced tools for visualization (like Google Data Studio & BigQuery, Tableau, Qlik, Power BI)	Level 4 + data science (predictive analytics, machine learning with e.g. R or Python), anomaly detection leveraging AI/ML
TESTING QUANTITY	**None or minimal:** 1-2 tests per quarter	**Ad-hoc testing or project based:** 1-2 tests per month	**Regular and planned testing** 2-5 tests per month	**Interactive testing** 5-10 tests per month	**Disciplined testing** 10+ tests per month
DIGITAL OPTIMIZATION TOOLS	Basic web analytics platform, performance monitoring	Level 1+ advanced web analytics; simple A/B testing tools (client-side); simple user research tools	Level 2+ advanced customer research tools; customer experience analytics tools; simple personalization tooling	Level 3+ advanced A/B testing tools (server-side) or own testing platform; project management tool for optimization	Level 4+ own testing platform embedded in the core digital platform; advanced personalization tools; pred. analytics & optimization tools
INTERNET BOOKING ENGINE	Our IBE doesn't support A/B testing and experiments	Simple A/B testing and experiments are possible but with workarounds and take long time & effort to implement	We can do basic and semi-complex experiments and A/B tests on an ongoing basis	We can do split-path A/B testing, have & test several versions of booking flow at the same time	We completely own and manage booking flow and have no limitations with A/B testing and experiments
ORGANIZATION SUPPORT AND PROCESS	**None** Digital optimization & experimentation is recognized on an individual level	**Head of E-Commerce** Digital optimization & experimentation is recognized on a departmental level	**Director level** Digital optimization & experimentation is recognized by director or higher management	**VP level** Digital optimization & experimentation is recognized and supported by VP level executive (top management support)	**Entire organization** digital optimization & experimentation is recognized as a crucial activity and has company-wide (C-level) support

DO YOU WANT TO TAKE **YOUR DIGITAL OPTIMIZATION TO THE NEXT LEVEL?**

*This special airline digital optimization workshop is **the best first step!***

Discover all of the most important aspects of airline conversion optimization (CRO) in a **hands-on, 1-2 day workshop.**

Learn – we'll provide you with airline Ecommerce and CRO best practices and benchmarks based on our research.

Identify - we'll deep dive into your booking funnel analytics and help you identify key optimization scenarios.

Plan – we'll evaluate your CRO maturity and help you plan the next steps based on our CRO maturity model.

Execute - we'll help you prepare and execute first optimization scenarios and A/B tests.

CONTACT iztok.franko@diggintravel.com FOR A DRAFT WORKSHOP AGENDA

KEY FINDINGS

FINDINGS SUMMARY – STATE OF AIRLINE DIGITAL OPTIMIZATION

Based on the revised Diggintravel Airline Digital Optimization Maturity Model and survey results by each area, we classified each participating airline into one of the following four categories: **Laggards, Challengers, Visionaries, Leaders**

We grouped our eight **maturity model areas** into two major groups:

• **Completeness of vision**—here we grouped areas that relate to understanding the importance of the digital optimization process, culture and organization (People, Skills, and Organizational Support).

• **Ability to execute**—here we grouped areas that relate to the ability to execute a digital optimization process in practice (Analytics, User and UX Research, Test Quantity, Tools, and Internet Booking Engine).

We used additional questions about the maturity of the digital optimization process (Is the process documented? Does it have a dedicated budget? How are experiment results shared?) to adjust the final maturity assessment for each participating airline.

According to our benchmark, we detected:

• 17 Laggards
• 9 Challengers
• 21 Visionaries
• 5 Leaders

The graph below shows how these categories correlate with the size and type of airlines.
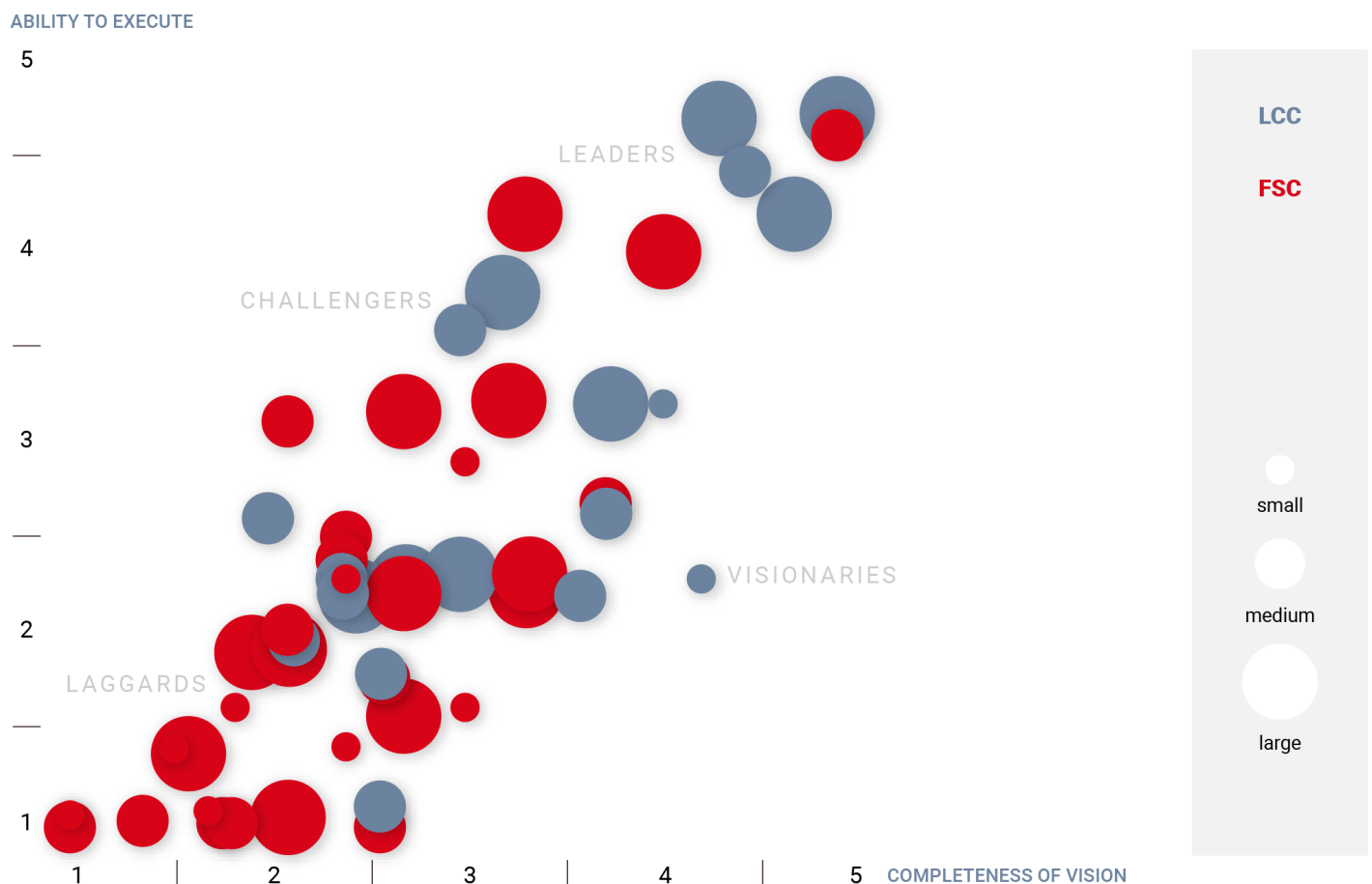
LAGGARDS

According to our maturity model, Laggards are the airlines that benchmarked the lowest (around Level 2 or lower on average) across all digital optimization framework maturity model areas. 17 out of 52 airlines are in this group, and 16 of these are traditional full-service carriers.

I. People and company support:
These airlines are either just starting out with their digital optimization process or have not yet recognized digital optimization and CRO as a critical part of their company growth. For the vast majority of airlines in this group, digital optimization is recognized and supported on a departmental level (usually the ecommerce department) or even an individual level (ecommerce or digital optimization specialist / enthusiast).

12 out of the 17 airlines in this group don't have a full-time dedicated person responsible for digital optimization. Conversion optimization is performed either by an online marketing specialist with general digital marketing knowledge (6 airlines), or an ad-hoc or part-time conversion optimization resource (6 airlines). Only 5 airlines out of 17 in this group claimed to have a small digital optimization team in place.

II: Skills and knowledge:
Only 4 of the 17 airlines in this group claimed to have a deeper knowledge of and experience with digital optimization (CRO, UX, Analytics, A/B Testing, Content & Copywriting). All others said they have general digital marketing knowledge or basic knowledge of CRO. Based on the answers in the "People" category, we could conclude that airlines in this group have a general understanding of what skills it takes to execute digital optimization, yet they lack the dedicated resources and team to do it in practice on an ongoing basis.

As you'll see in the "Skills" section, digital optimization requires a complex and large set of specialized skills. This is a challenge for smaller airlines, where there are typically fewer employees with specialized skillsets compared to larger companies.

III. User & UX research, tools and analytics:
Understanding your users is the core of digital optimization, and this is one of the areas where Laggards struggle the most. 11 out of the 17 Laggards only do basic web analytics when it comes to user research. 4 airlines do basic user & UX research (some session recordings, simple A/B testing, heat maps and click maps, ad-hoc customer surveys). Only 2 airlines in this group do regular customer feedback and survey analysis, form analysis, and occasional unmoderated or moderated user testing.

12 airlines in this group stated web analytics is their only digital optimization tool. 3 others use simple digital optimization tools (simple A/B testing tools, simple user research tools), and only 1 airline claimed to use advanced customer research tools, customer experience analytics tools, or a simple personalization tooling.

In addition, all but one of the Laggards claim to have internet booking engines (IBEs) that are not flexible enough for A/B testing. Most airlines in this group (12 out of 17) do basic web analytics with some additional settings (goals, simple funnel report, etc.).

IV. Testing quantity:
Only 2 out of 17 airlines in this group claimed to do regular testing (2-5 tests per month). All other Laggards perform A/B testing and other forms of experimenting on an ad-hoc project basis only (if done at all). If testing is performed, it's usually done for major website redesigns. Most claimed lack of knowledge, resources and technology constraints as their biggest obstacles to doing A/B testing on a regular basis.

V. Process, budget and knowledge sharing:
Most Laggards are just starting with their digital optimization activities, so the process is not documented and structured. None of the 17 airlines claimed to have a documented digital optimization process; 7 claimed that they do have a process for digital optimization, but it's not documented. Only 2 out of 17 claimed that they have a budget for conversion optimization, though it's not dedicated but rather part of the overall ecommerce budget. 7 out of 17 Laggards don't share experiment results and learnings (not shared at all or shared strictly within the optimization team).

NEXT STEPS FOR LAGGARDS:
EDUCATE!

Learn about digital optimization CRO as much as possible and understand the value of a structured digital optimization process.

Find and train an internal digital optimization champion who will put experimentation and CRO on the map. It's crucial to evangelize, advertise and advocate experimentation and A/B testing within the ecommerce and digital departments to foster the testing and data-driven culture. Once education and intradepartmental acceptance is achieved, it will enable airlines from this group to build a good case for digital optimization and experimentation buy-in on an organization-wide level. At that point, a small, agile digital optimization team and process can be formed.

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CHALLENGERS

We classified as Challengers the airlines that are not Laggards (so their average score per area is above Level 2) and are ranked higher in "Ability to Execute" (above Level 3 on average) than "Completeness of Vision" (below Level 3 on average). 9 airlines fit these parameters, so this is the second smallest of the four groups. Challengers do more "execution," but in a less structured and organized way – or they have advanced digital optimization tools, do advanced analytics and some testing, but digital optimization and experimentation are done on an individual level, or within a small digital optimization team.

I. People and company support:
Only 3 out of 9 airlines in this group have a CRO team in place. In fact, 2 airlines claimed they don't have a dedicated conversion optimization resource. This means digital optimization is mostly done on an individual level. Digital marketing specialists perform digital optimization activities, but CRO is still not a core ecommerce process. None of the 9 airlines in this group said that CRO is recognized and supported by top management. Only 4 claimed digital optimization had support on the director level; for others, it's mostly on an individual or ecommerce department level.

II. Skills and knowledge:
Most airlines (6 out of 9) in this group claimed to have deep knowledge of conversion optimization (e.g., CRO, UX, analytics, A/B testing and copywriting). However, this knowledge is mostly gathered on individual level, by CRO or digital optimization enthusiasts and specialists.

III. User & UX research, tools and analytics:
Airlines in this group are more advanced when it comes to user research, analytics and digital optimization tools. 5 out of 9 do user research activities on an above-average level (Level 3 or Level 4). All but one are above average in digital analytics (detailed funnel analytics, attribution modeling and cross-device tracking); 6 even claimed they do advanced digital analytics and use advanced tools for visualization (like Google Data Studio & BigQuery, Tableau, Qlik, or Power BI). The challenge for this group is that activities are sometimes still done for silo tests and optimizing micro metrics, rather than within a long-term, companywide optimization and digital product plan.

IV. Test quantity:
This group performs A/B tests and experiments at an above-average rate. 6 out of 9 airlines do testing on a regular basis. 4 airlines in this group do at least 5-10 tests every month. Challengers need to be careful not to use tests as the main optimization activity, but rather to use them for validation of hypotheses only.

V. Process, budget and knowledge sharing:
Lack of organizational recognition for digital optimization and CRO is evident for Challengers. 2 of the 9 airlines don't have a budget for digital optimization activities (for the remaining 5, it's part of the ecommerce budget), and only 2 claimed to have a dedicated budget for optimization and experimentation. All 9 claimed to have a digital optimization process, yet only 5 of them have it documented and structured.

NEXT STEPS FOR CHALLENGERS: EMPOWER!

Challengers understand the value of digital optimization and CRO but still struggle to get companywide exposure and support. CRO experts and their department managers need to be proactive in explaining the value of digital optimization to their key stakeholders.
Be transparent about experimenting and make case studies out of winning tests with clear ROI calculation. This will help you get the recognition and resources needed to take the next step – form digital optimization and CRO teams and structure the activities and tests in a strategic optimization plan.

VISIONARIES

Visionaries is the largest group, consisting of 21 airlines. Airlines in this group are not Laggards, so their average score is above Level 2 across all areas. Visionaries are airlines that ranked higher in "Completeness of Vision" (above Level 3 on average) than "Ability to Execute" (below Level 3 on average).

I. People and company support:
Visionaries have a clearer understanding of the potential and importance of CRO and digital optimization than Laggards and Challengers. Their average score is above Level 3 across People, Skills and Organizational support areas.
80% of airlines in this group claim to have a digital optimization or a CRO team in place. 3 even claimed to have Level 5 full-scale conversion teams.
33% of airlines in this group claimed to have top management support for digital optimization and CRO (at least Level 4).

II. Skills and knowledge:
16 out of 21 airlines in this group claimed to have deep knowledge of conversion optimization (e.g., CRO, UX, analytics, content and copywriting). 6 airlines even stated they even have advanced CRO knowledge (UX excellence, advanced analytics, conversion centered design) or better.

III. User & UX research, tools and analytics:
Visionaries have the means and vision but don't execute at the same level as Leaders or, in some areas, even Challengers. Therefore, this area and test quantity is where they lag behind. 47% of airlines in this group still don't do systematic user research and user feedback activities, and 52% mostly use simple tools for such activities. One area that really prevents Visionaries from executing better is the Internet Booking Engine. 48% said their IBE makes it difficult to do A/B testing and experiments, while only 5 said their IBE is flexible enough to do more complex experiments (Level 4 or Level 5).

IV. Testing quantity:
This is the key area in which Visionaries need to improve. Experimentation is a key part of digital optimization and the CRO process. Limitations on tools and especially the IBE result in less than optimal execution of A/B testing and experimenting. Only 2 out of 21 airlines in this group do at least 5-10 A/B tests and experiments per month. What's more, 67% of airlines in this group still test only on a project or ad-hoc basis.

V. Process, budget and knowledge sharing:
95% of Visionaries follow a digital optimization process, 24% claim it is documented. 62% say they have a budget for conversion optimization. All but one share experiment results with broader commercial teams, 10% share results across entire organization.

NEXT STEPS FOR VISIONARIES: **ENABLE!**

Educate the IT team on the importance of experimentation to get the right tools in place. Implement an agile, modular Internet Booking Engine that supports different flows and instances and more complex A/B testing (like split path testing).
Consolidate development to support CRO activities and start building digital optimization teams (product manager, conversion specialist, analytics specialist, front-end & back-end developers). analytics specialist, front-end & back-end developers). Dedicate development resources to testing (as a part of your product development sprints). Start with agile and systematic user research activities to really understand your users' pain points. Once the proper tools and team are in place, increasing the number of experiments is a critical next step for this group, as it directly influences faster learning, growth and ultimately innovation.

LEADERS

Only 5 out of 52 airlines were classified as Leaders. They form the elite digital optimization group. Airlines in this group are on average at Level 4 or higher in almost all areas. LCC airlines dominate this group (4 out of 5). There are 2 medium-sized airlines in this group; the other 3 are large airlines. It's not a coincidence that bigger airlines dominate this group. The resources and expertise needed to build a CRO-centric organization can be an issue for smaller airlines. However, digital optimization should not solely be the domain of the biggest airlines. Even smaller airlines can advance to a higher level of digital optimization maturity with a smart and agile strategy. There are airlines in this group that achieved high CRO maturity and high experimenting volumes with a unique outsourced approach.

I. People and company support:
Digital optimization and experimentation have become a part of the culture for these airlines. CRO, testing and experimenting are recognized as crucial processes on an organizational level. All airlines in this group claimed that CRO has support at least at the VP level, and all but one even said conversion optimization is recognized as a crucial activity by their organization (Level 5). All Leaders have dedicated CRO teams in place with advanced CRO skills and knowledge. 3 out of 5 claimed to have a full-scale digital optimization team (a team that consists of UX researcher, copywriter, front-end developer, back-end developer, and other experts), or several digital optimization teams. Roles like Conversion Optimization Expert, Senior Digital Optimization Specialist, and Data Scientist are common in this group. Most of the digital optimization teams are hybrid: a combination of internal digital optimization resources and dedicated outsourced CRO experts.

II. Skills and knowledge:
Leaders are pushing their CRO skillsets to the next level. They have advanced CRO knowledge (e.g., UX excellence, advanced analytics, conversion-centered design). Almost half (2 out of 5 airlines) of this group go even further when it comes to CRO skills (Level 5 – e.g., persuasion techniques, conversion copywriting, advanced user data, BI and datamining).

III. User & UX research, tools and analytics:
Leaders recognize that understanding your users is key. They all do regular user research and feedback activities, extensive UX research, and usability testing. 4 out of 5 claimed to do scheduled and planned moderated and unmoderated user testing, customer struggle scores and prototype testing.
When it comes to advanced analytics, 2 out of 5 airlines claimed they do data science (e.g., predictive analytics, machine learning). All others do advanced digital analytics and use special visualization tools. All Leaders claimed to use testing platforms, and 3 out of 5 have built their own tools for testing. All 5 airlines in this group claimed to have a completely flexible IBE (Level 5) that supports experimentation.

IV. Testing quantity:
A true Leader can be recognized by the number of experiments being run in the organization. All but one of the airline digital optimization Leaders test and experiment on a regular and planned basis (at least 2-5 tests per month). One airline claimed to do at least 5-10 experiments per month, and the best airline in this group claimed they run more than 10 experiments every month.

V. Process, budget and knowledge sharing:
All Leaders follow a documented digital optimization process. All Leaders have a budget for conversion optimization, 20% say it's a special dedicated budget just for optimization and experimentation. 60% of Leaders share experiment results across entire organization.

NEXT STEPS FOR LEADERS:
SCALE, AUTOMATE, AND FOSTER A CULTURE OF EXPERIMENTATION

Even Leaders can take the next step since digital optimization and CRO is about constant learning and growth. While CRO Leaders are the best among airlines, there is still a gap here compared to the travel industry experimentation elite like Airbnb, Uber, Booking.com, Skyscanner, Hopper or eDreams.

So, the real challenge for this group is doing experimentation on an even larger scale and catching up with the travel and digital elite. This is why the Diggintravel Podcast and this Yearbook provide special interviews and tips from experimentation leaders who have studied how to build large-scale experimenting programs.

Leaders need to "democratize" experimentation and work on creating a decentralized organization to support experimentation and innovation on a large scale. And yes, we understand that most of the travel elite are companies who provide digital product only and are basically tech companies. However, airlines can apply experimentation and CRO principles to their physical product as well.

You can learn from Leaders, and from our contributors Lukas Vermeer and Ben Labay, that true innovation will be enabled once airlines take experimentation from the digital & channel (UX) level to the product level.

2022 AIRLINE DIGITAL OPTIMIZATION SURVEY – COVID-19 IMPACT ON AIRLINE DIGITAL OPTIMIZATION TEAMS

The pandemic has significantly disrupted the airline industry over the last two years. However, airlines have responded differently when it comes to their digital optimization team downsizing.

46% of airlines claimed that their digital optimization team stayed the same, while 36% said they had to downsize their team. On the other end of the spectrum, 18% of carriers accelerated their digital initiatives and increased their digital teams during the COVID-19 pandemic.

But even for airlines that didn't decrease the size of their digital optimization team, we saw a drop in digital optimization maturity during our 2022 research. The pandemic caused a lot of fluctuation among digital expert roles. Our detailed survey results show that airlines did less detailed CRO and experimentation processes, and there were fewer highly specialized digital optimization roles.

However, at the time of finalization of this Yearbook, in January 2022, we're seeing an influx of new airline digital roles on our Diggintravel Airline Digital Job Board. This makes us believe that some airlines have started the recovery phase, with an increased focus on rebuilding their digital teams and taking a step upwards in their digital optimization maturity.

Did you decrease or increase your digital optimization (product, analytics, UX) team because of the COVID pandemic?
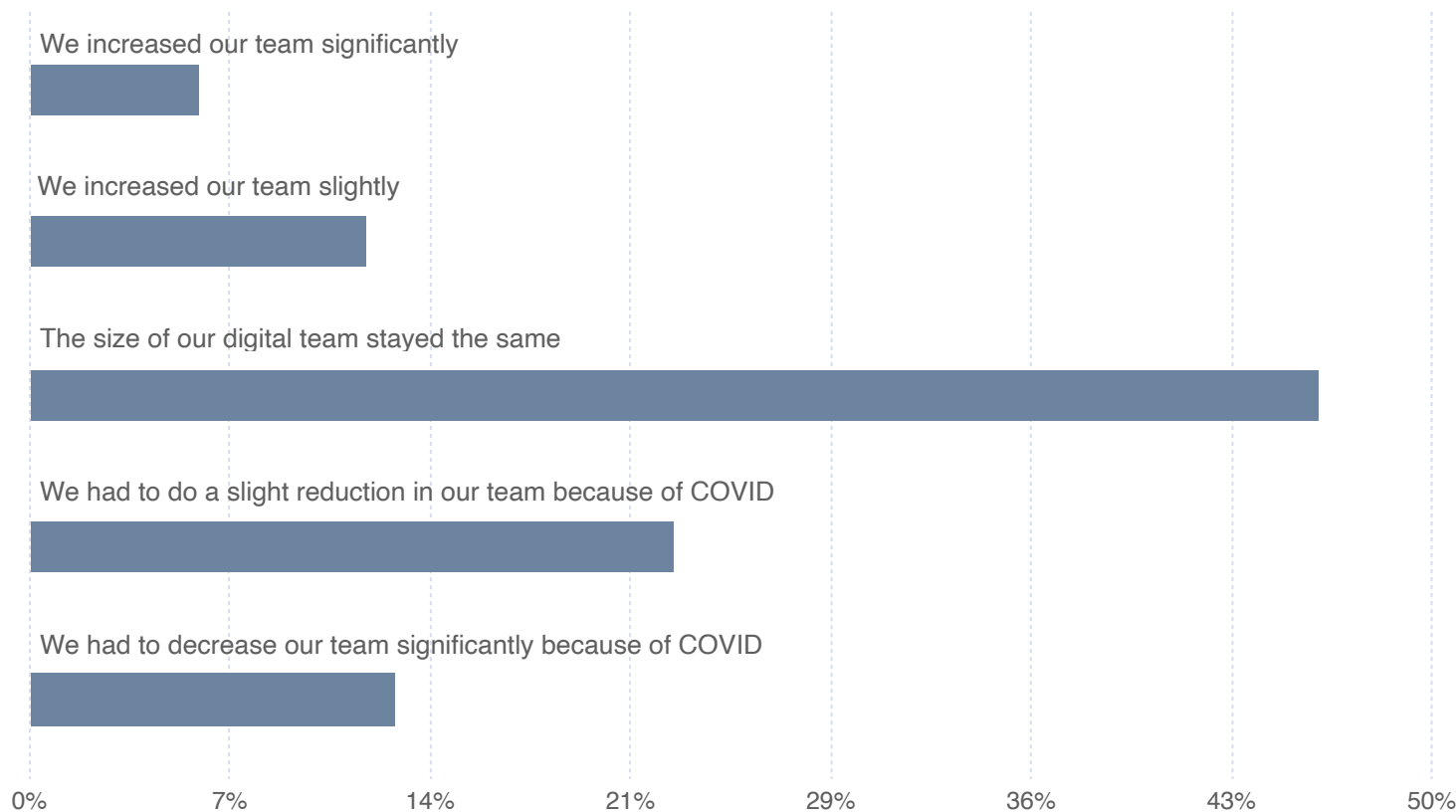
2022 AIRLINE DIGITAL OPTIMIZATION SURVEY – **10 KEY STATS**

Because of the pandemic, most airlines have had to take a step back when it comes to digital optimization and CRO. Digital maturity did take a hit for most airlines over the last two years, but there are carriers who have used this time to accelerate their digital transformation.

Below you can find 10 key stats from our 2022 Airline Digital Optimization Survey that highlight the key developments over the last two years:

58%

of airlines *ranked 2.5* or lower across all 8 digital optimization categories, compared to 47% in our 2020 survey. *31% of airlines ranked 3.0* or higher on average; this share was 43% in 2020. **5 airlines** *were classified as Leaders, and they all averaged above 4.4* across our 8 CRO categories.

58%

of airlines *have digital optimization teams* in place.

25%

of airlines don't do any *user & UX research activities.* On the other hand, *17% do advanced research* (scheduled moderated and unmoderated user testing, customer struggle scores, prototype testing).

62%

of airlines *don't run experiments at all* or only do them on an ad-hoc, project basis (on the other hand, *17% of airlines* run at least 5 experiments per month).

69%

of airlines *combine digital optimization and personalization* activities within the same team. 51% say they use a personalization engine or a tool for personalization.

29%

of airlines have a *documented and structured* conversion optimization process.

37%

of airlines *do advanced digital analytics and use visualization tools* in addition to their digital analytics tool. 30% of the surveyed airlines use Digital Experience Analytics on top of their primary web analytics platform.

56%

of airlines *only use simple testing* and user research tools. 51% also claim that their internet booking engines (IBE) are not flexible enough to allow experimentation.

42%

of airlines, recognize digital optimization and experimentation *on an individual or departmental level* (on the other hand, 33% of airlines claim they have top management support for experimentation).

50%

of airlines said that they *don't have a budget for digital optimization* and experimentation. For 40% of airlines, CRO is part of the marketing or ecommerce budget, and only 10% have a dedicated budget for experimentation.

diggin travel

Save the *frustration* for the security line
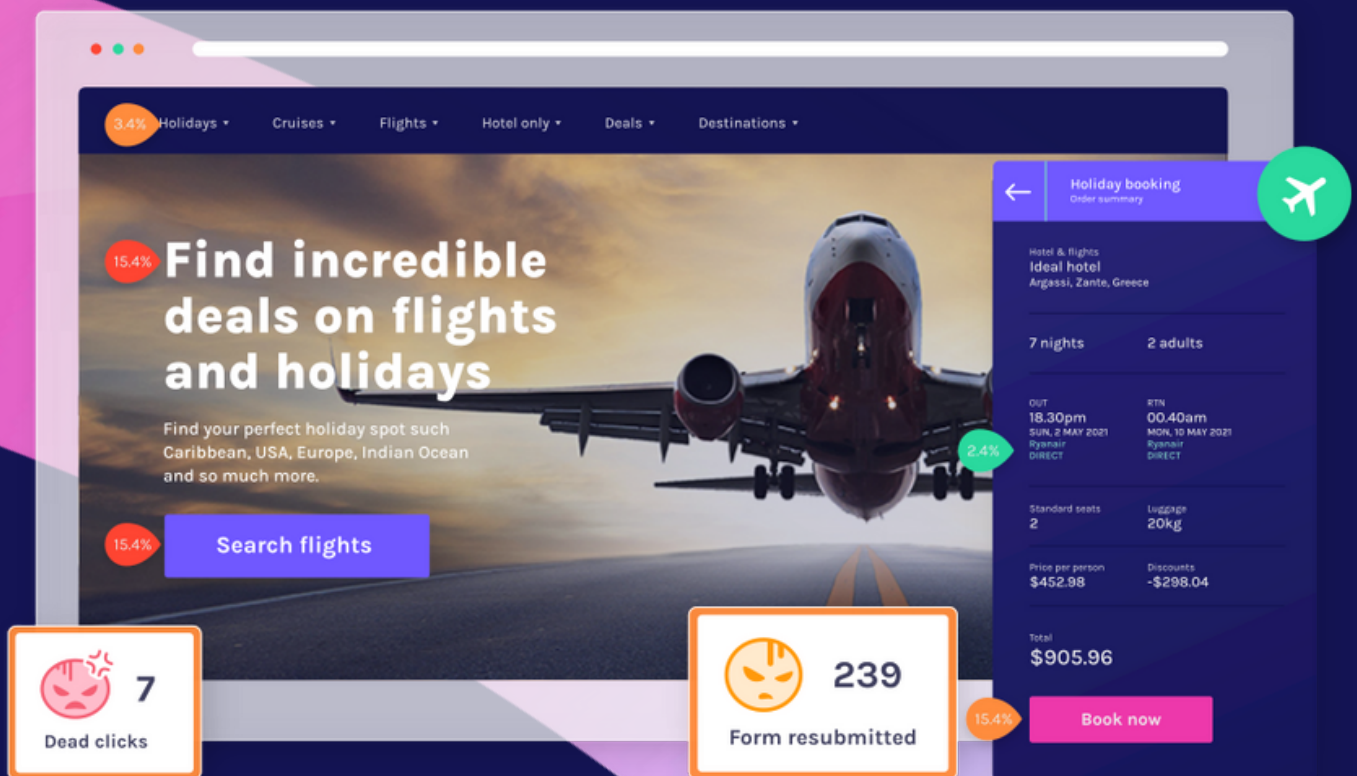
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2022 SURVEY DETAILS

PEOPLE

# WHO PERFORMS DIGITAL OPTIMIZATION (CRO) TASKS IN YOUR ORGANIZATION?

- **Level 1:** Online marketing specialist
- **Level 2:** Ad-hoc or part-time conversion optimization resource
- **Level 3:** Full-time conversion optimization resource (CRO specialist)
- **Level 4:** Small digital optimization team (product owner, web analyst, designer, developer, CRO specialist)
- **Level 5:** Full-scale digital optimization team (in addition to the small team - UX researcher, copywriter, front-end developer, back-end developer, other experts), or several digital optimization teams
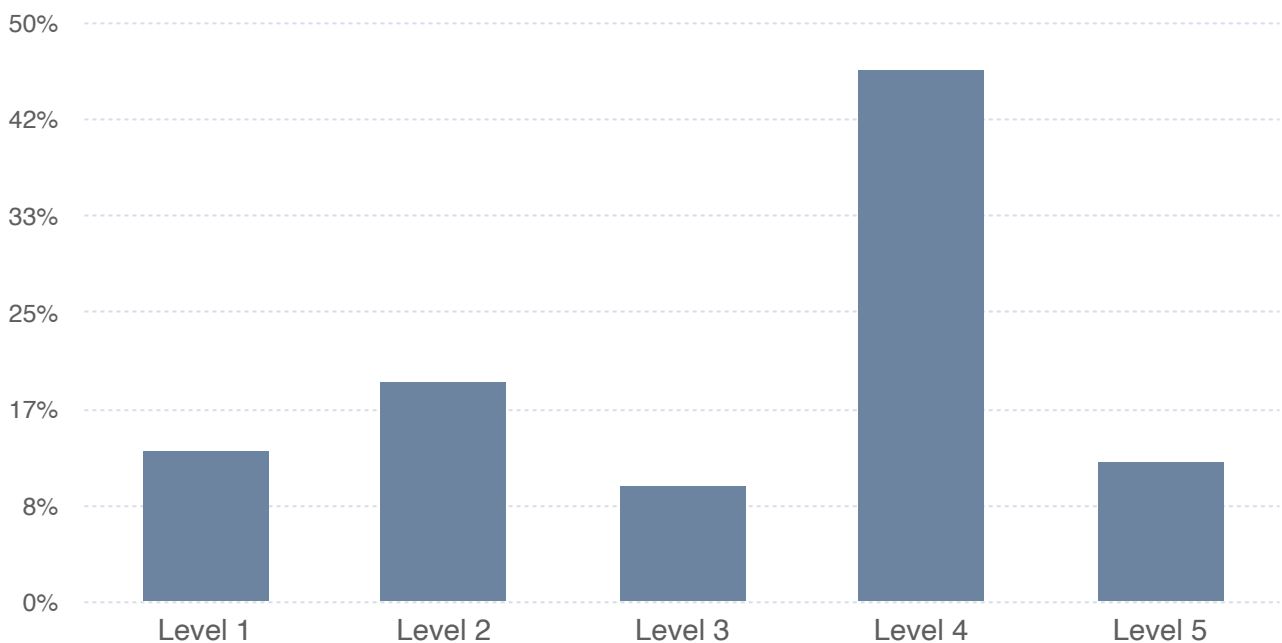
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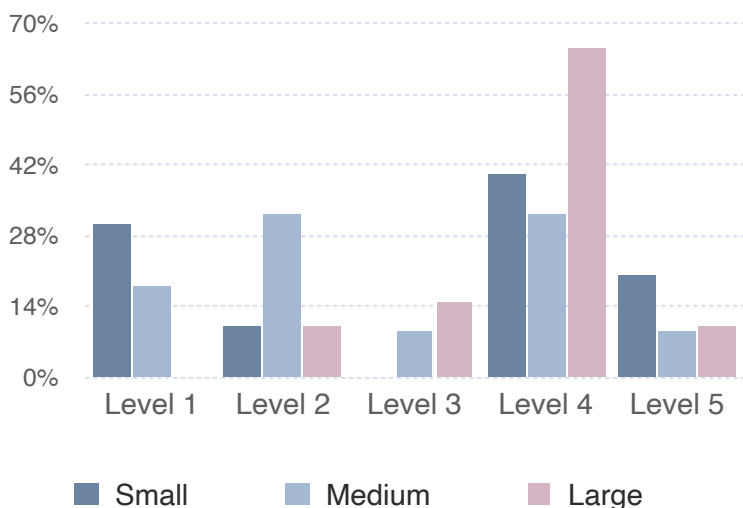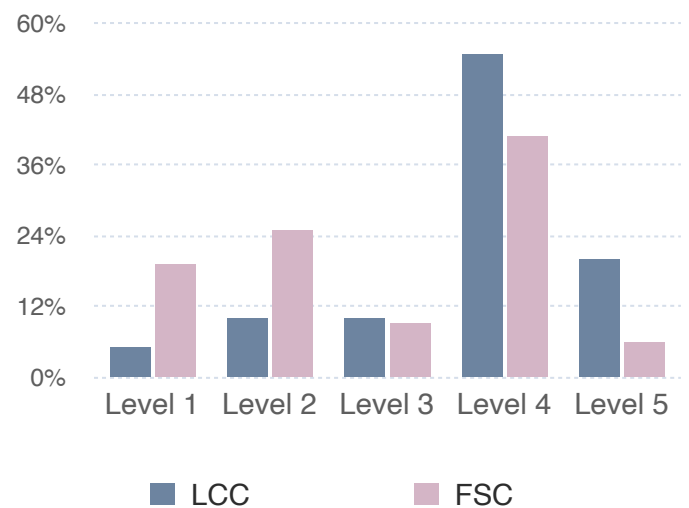
Small   Medium   Large

By Type

LCC   FSC

We can start our detailed survey results analysis sections with good news: Most airlines recognize that digital optimization is not a job for one person (a specialist), but rather an ongoing process that requires a team. **58%** of airlines have either a dedicated small conversion optimization team or a full-scale conversion team in place. The bad news (as you'll see in the next sections) is that overall, airline digital teams have gotten smaller. This means digital optimization teams have fewer specialized digital optimization skills (see Section 2), and digital experts have to perform other tasks, which results in less structured and systematic digital optimization activities (see Sections 3, 4, and 5).

When it comes to digital optimization teams, there is a big difference between LCC airlines (75% of them having dedicated teams) and FSC airlines (only 47% have dedicated digital optimization teams).

On the other end of the spectrum, there is still a significant share (33%) of airlines that don't have specialized CRO resources in place. This share jumps to 44% for traditional FSCs, as many of them still don't understand the value of a structured digital optimization process. Having at least a dedicated CRO person is the first critical step airlines need to take if they want to build an optimization program. Most airlines that don't yet have a full-time CRO person claim lack of budget and knowledge as the key obstacle. Establishing first optimization scenarios, getting early wins and communicating the ROI of increasing conversion rates should help airlines get (budgetary) support for their optimization and experimentation programs.

Once you have a dedicated digital optimization expert in-house, you need to think about how to

take the next step – building a systematic, ongoing CRO process and a small CRO team. Most airlines start with a combination of an internal CRO lead and a specialized CRO agency to help them with CRO activities (like analytics, user research, and A/B testing).

Establishing **a small, centralized optimization team** (data analyst, UX researcher / designer, developer, CRO specialist) is crucial for a successful program. Having dedicated developer resources for experimentation has a huge impact on the number of experiments you'll be able to run.

All five Leaders from our research have dedicated optimization teams. What's more, 4 out of 5 Leaders claimed to have a full-scale team (Level 5) or several digital product and optimization teams. In order for them to take their optimization to the next level, they'll need to democratize experimentation and look at **a decentralized model or a model with a Center of Excellence** that allows different teams to optimize and experiment on different digital products in parallel.

You can find a short Q&A with **experimentation leader Lukas Vermeer** about different organization models, particularly models that will help you scale your experimentation, in the **"Ask the Expert" section**.

KEY TRENDS: WHAT CHANGED COMPARED TO 2020

2022 **2020**
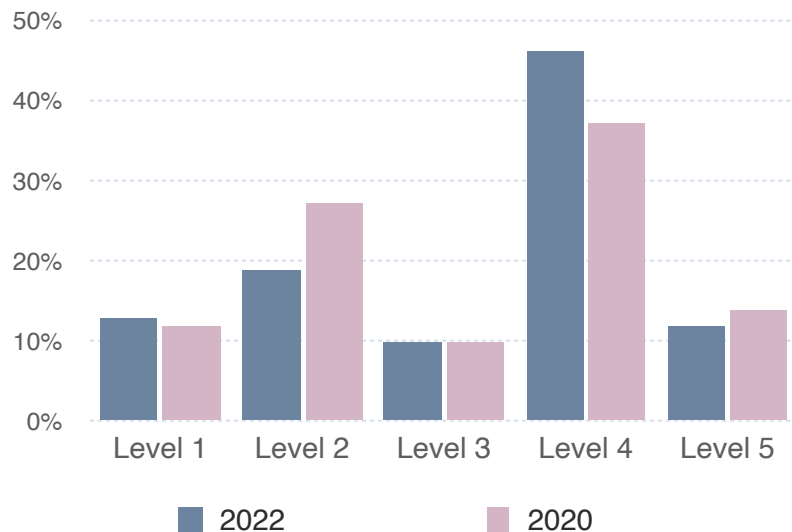
The "People" area is one of the rare areas that improved in our 2022 survey, compared to 2020. 58% of airlines in our survey have a team that performs digital optimization (Level 4 or Level 5), which is a slight increase from 2020 when this share was 51%. By comparing the 2022 and previous survey results, you can see that the biggest jump happened in the Level 4 category. This is a continuous trend that shows more airlines are recognizing conversion optimization and the importance of having a dedicated optimization team. We see steady progress here: in our 2019 survey, only 29% of airlines claimed to have a dedicated team in place (Level 4 or Level 5); this share increased to 51% in 2020, and is now at 58% in our 2022 survey.

The bad news is that due to COVID-19, the airline industry has faced a lot of turnover in their digital departments, which means a lot of knowledge and specialized skills were lost. We've seen airlines reducing staff, including many digital and optimization experts. Some airlines have started to invest in their digital teams again, but it will take a while to rebuild the digital optimization process and skills needed. Airlines who claimed to have a dedicated optimization team have it set up in different ways. 45% of airlines who have a CRO

team said their team is a combination of in-house and outsourced resources. Another 45% claimed they run digital optimization and testing (experimentation) completely in-house. Only 10% said they have a completely outsourced model, where an external agency runs their testing and experimentation program. Regardless of how you plan to build your digital optimization team (in-house, outsourced, or hybrid), you need to have a digital and ecommerce strategy that recognizes conversion optimization as a strategic pillar. You need to map strategic assets (know-how, process, experimentation learnings, user research data) and see what you can outsource as demand and traffic returns to your website. You can outsource specialized skills (for example, advanced analytics, development, UX research, etc.); however, the strategic part (planning, managing, goals) of the testing and optimization process needs to be in-house. You need to define clear metrics, focus on things that have a direct impact on the bottom line, and be able to explain the value of increasing conversion rates to your management to get support. Regardless of the organization and resources, you will need to be more agile and lean. No more long RFPs and 2-year "new booking engine" implementation projects. Your digital product team(s) need to be able to do fast, agile iterations. See our "**Ask the Expert" section for an example of agile planning and testing in short cycles.**
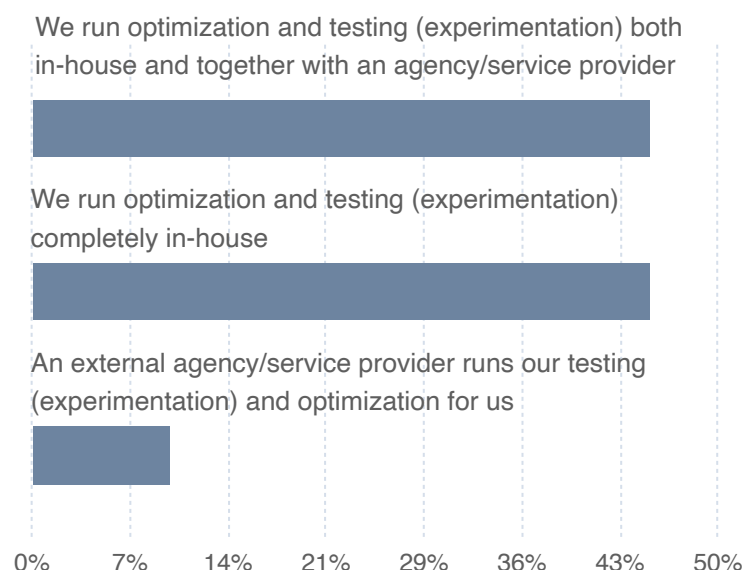
FINNAIR DIGITAL TRANSFORMATION: IN-HOUSE DIGITAL TEAM AND AGILE PROCESS

Esamatti Vuolle
Head of Digital Commerce at Finnair (2018-2021)

NOTE: Esamatti, Lukas, Diego and some of the other experts we interviewed during this research process have since changed their jobs to pursue opportunities in other industries. This is another example of how great an impact the pandemic had on the travel industry. However, all of the insights and learnings from our Ask the Expert interviews are still relevant.

Finnair's digital transformation journey started way before the pandemic, and the focus on digital resulted in a record-breaking digital year in 2019.

"2019 was record breaking for the digital business at Finnair. We grew both conversion rate [+35%] and average order value [+20%], so we were not only able to get the most out of our traffic, but also sell more value per item to our customers. We also got really nice feedback from our customers, not to mention our mobile app got an NPS score of 62, which is pretty good in our industry."

The growth was a result of Finnair's digital transformation journey, which included building its own digital platform and digital team.

"The focus on digital, especially in 2019, has been on the [Finnair website]. In the past Finnair used off-the-shelf solutions for our website, but then we decided to take a different approach. We wanted to build it ourselves; we wanted to have a product-based approach. So, we built an in-house digital product team. In our best days we had close to 100 people working in-house on our digital

touchpoints (finnair.com, mobile app, in-flight entertainment)."

Of course, the pandemic meant Finnair needed to downsize their digital teams and rethink their priorities.

"In just a few weeks, we lost over 90% of our business, so we needed to think really carefully [about] what we wanted to do and where we would put our focus."

However, because of the digital transformation Finnair had already completed before the pandemic, the key elements of their customer-centric digital approach remained the same, even with a smaller digital team. This means listening to customers and having an agile process of short research, development, and testing cycles.

"One of the essential things about the in-house development team was that you could innovate, develop and test in short cycles. If you had a good idea, a good hypothesis, you could just walk by the airport and test it on our customers, on a prototype or even on paper. And then you could develop it in a short cycle and test again on customers. Having customers close to us and having a short feedback loop has enabled us to have a really short time to market."

The concept of agile planning with fast iterations and customer feedback loops is really interesting. Digital optimization is all about fast loops of analytics, agile user research, optimization, and testing. Esamatti explained how Finnair's agile planning process looks in practice.

"We planned our digital development in 12-week cycles and we defined objectives per cycle, so what we wanted to achieve. Our teams were empowered and they knew how to solve the problems to achieve the objectives. We were empowering them to find the solutions. We wanted the cadence of 12-week cycles because we need to give them 'peace' to work, which is long enough to try things, try to find solutions, and work on different problems.
However, the actual delivery – the discovery, definition and design – those were done in 2-week cycles, 2-week sprints. So we had a short time to market, short iterations and we get product out as fast as possible."

Common planning cadence supports stakeholder alignment in terms of development priorities. It also helps daily time management when knowing what happens and when, well in advance.

Development drumbeat
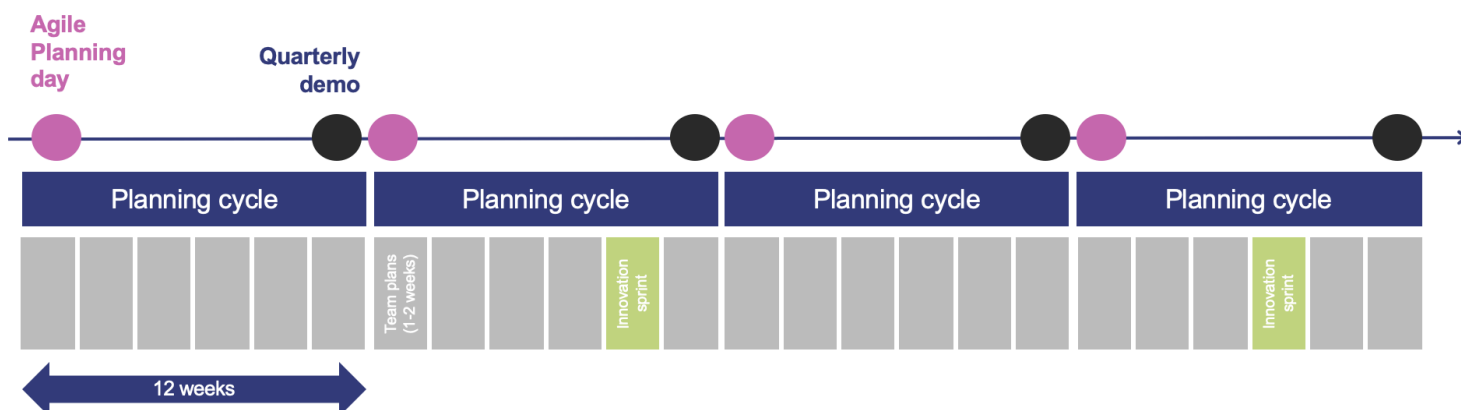
Digital platform development is planned with 12 week planning cycles. As preparation, digital platform extended team (incl. key stakeholders) defines the priority order of epics in advance. Planning is done in f2f event called agile planning day, covering all teams. Teams get together in weekly SoS (Scrum of Scrums) for cross-team. Internally teams follow 1-2 week planning cycle and have daily stand-ups.

HOW TO ORGANIZE FOR EXPERIMENTATION IN A LARGE ORGANIZATION WITH MANY DIGITAL PRODUCT TEAMS

Lukas Vermeer

Experimentation Leader, Director of Experimentation at Vista, previously Director of Experimentation at Booking.com (2019-2021)

Booking.com, Airbnb, and similar companies are the benchmarks when we're talking about companies that do experimentation at scale. I was really surprised when I heard that as a Director of Experimentation, you didn't have any direct reports – almost like a coach or an advisor, or even an enabler, of experimentation.

"This was true for the first few years of my career at Booking. I was more of an evangelist and a coach for this topic. Although there were different teams that were running experiments that had dotted lines into me, I had no direct reports. If you think about the different organizational models that you can have as an organization, this is what we would call the fully decentralized model, where there's not really a Center of Excellence, but more like a person that is trying to lead this."

Like a Person of Excellence?

"Yeah, if you want to call it that. Then as we matured, we realized at some point that actually it is limiting in many ways to have no official centralized organization, to have no Center of Excellence, and try to do everything in a centralized manner. We noticed that when we started seeing that these decentralized teams were tackling very similar problems, very similar projects, but they were really struggling to

effectively communicate and work together on these things. There was really no official guidance or direction given because they did not report to me. I could try to guide them and coach them, but ultimately they were accountable and responsible to different parts of the organization.

Right after we published that thing where I said I have no direct reports, we made a switch and said we're going to take some of these people, some of these teams, and centralize them into a Center of Excellence model where I lead a track or a department that has 20 some people in it, and those do report in to me. That has changed."

What do these people do? Do they still provide guidelines and make sure the quality assurance of the experimentation is done the right way with the product teams?

"This is an excellent question because it often leads to confusion. People ask me what sort of experiments I'm running, and the answer is I don't really run any experiments because that is not our core responsibility. We are an internal tooling provider, or you could call us an internal product group that provides a product, an experimentation platform, that can be used by other parts of the organization to run experiments. And we do that in different ways. One is that we have to provide technical enablement. We have a lot of people working on ensuring that this product is integrated into all of our systems so that it's technically possible to run experiments."

"We do that by collecting the data in reliable ways. We have centralized pipelines and we have people responsible for those pipelines to ensure that every part of our organization collects information about experiments in the same way. And we do that by education and support. If people want to run experiments and they need help, they can ask us, and we have a semi-professionalized support channel where we have SLAs on how quickly we respond to queries, etc."

So, if I repeat the magic question about the best organization model, there is no right answer, and it probably depends on the digital maturity of your organization?

"It's a question I get a lot at conferences. People ask me, "What do you think is the best model for embedding experiments in your organization?" I've been with Booking for 8 years now and I have seen all of them. First we were a single team embedded in a product organization, helping that product run experiments.

Then we were a decentralized group of teams with dotted lines to a person of excellence, if we can call it that. Then we moved into a Center of Excellence model where we have all these teams sitting together reporting in to one person so that we can work more effectively together.

I would say that all of those models are correct given the context of the organization at the moment. There's no way that we could've done Center of Excellence 8 years ago. And there's no way that a fully embedded single product team would work now. So the question of "What is the best model?" is pretty nonsensical, really, because it totally depends on where your organization is in their journey."
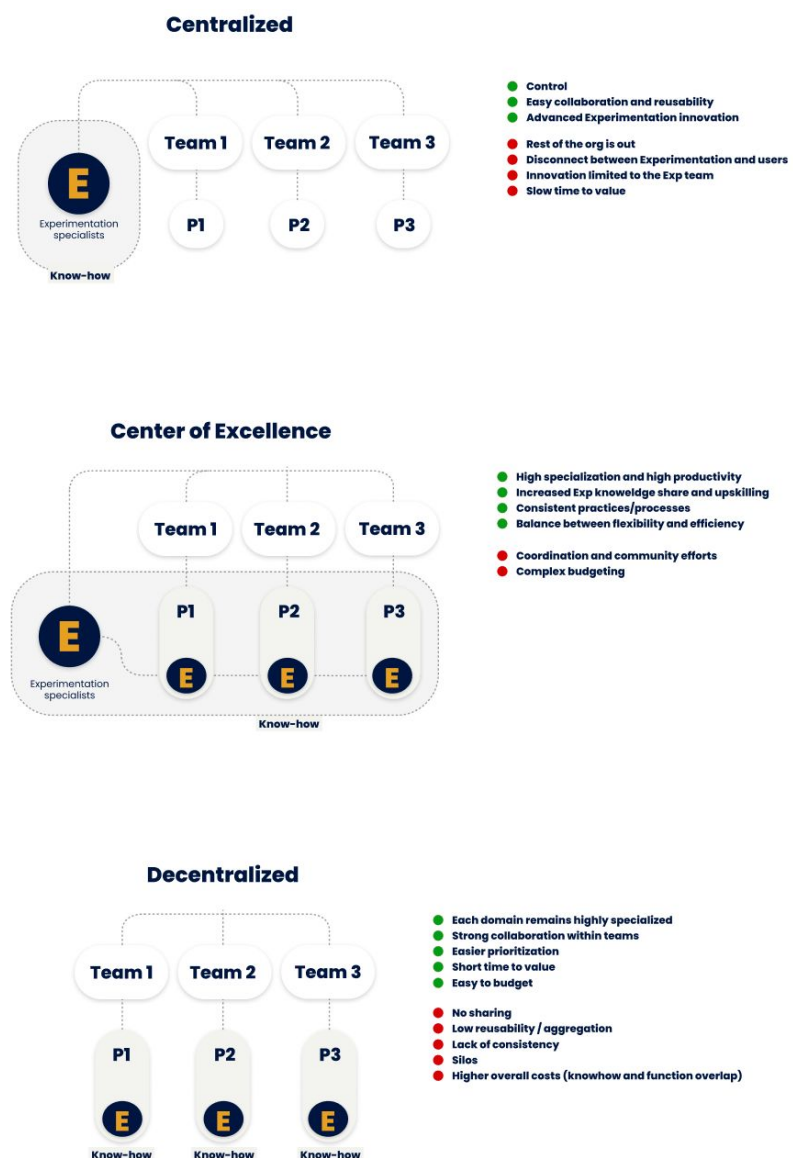
Various organization models for experimentation (Source: Speero)

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AirAsia Center of Excellence (CoE) for Data Science is a technology centre that works on innovative long-term projects across various companies in the AirAsia group, including Airasia.com, BigPay, Teleport, BigLife, RedBeat Ventures, OurShop, etc.

What You'll Do

- Design and implement automated Bayesian A/B testing to power AirAsia's experimentation platform across various businesses in AirAsia group

- Play a key role in formulating, scoping, implementing, and evaluating data science initiatives

- Mentor and help data scientists across the organisation to run experiments, get trustworthy results and make good decisions

About You

- At least 5 years of relevant experience as a data scientist

- A strong grounding in statistical methods, controlled experiments and Bayesian A/B testing

- Hands-on in data science projects, and provide guidance and coaching to the data science team

- Hold yourself and others to a high bar when it comes to experimentation and data science

- Programming experience in Python and Hadoop/Spark, and SQL working proficiency

- Thrive in a collaborative environment involving different stakeholders and subject matter experts

Here is an example of the AirAsia Data Science and Experimentation role embedded within a Center of Excellence (CoE) model.

SKILLS AND KNOWLEDGE

Q: WHAT IS THE CURRENT LEVEL OF DIGITAL OPTIMIZATION SKILLS IN YOUR ORGANIZATION?
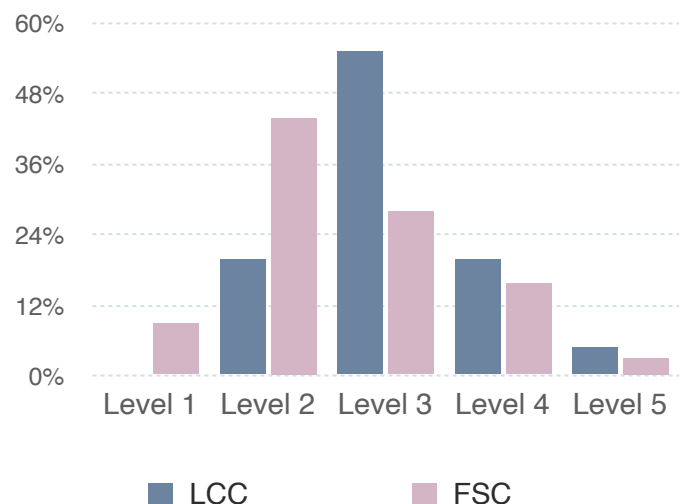
- **Level 1:** Basic online and digital marketing knowledge
- **Level 2:** Basic conversion optimization, UX and analytics knowledge
- **Level 3:** Deeper knowledge about conversion optimization: CRO, UX, analytics, A/B testing, content & copywriting
- **Level 4:** Advanced CRO knowledge (Level 3 + UX excellence, user behavioral knowledge, advanced analytics including segmentation)
- **Level 5:** Experts in conversion optimization (Level 4 + conversion-centered design, analytics experts, testing automation, personalization)

By Size

Small · Medium · Large

By Type

LCC · FSC
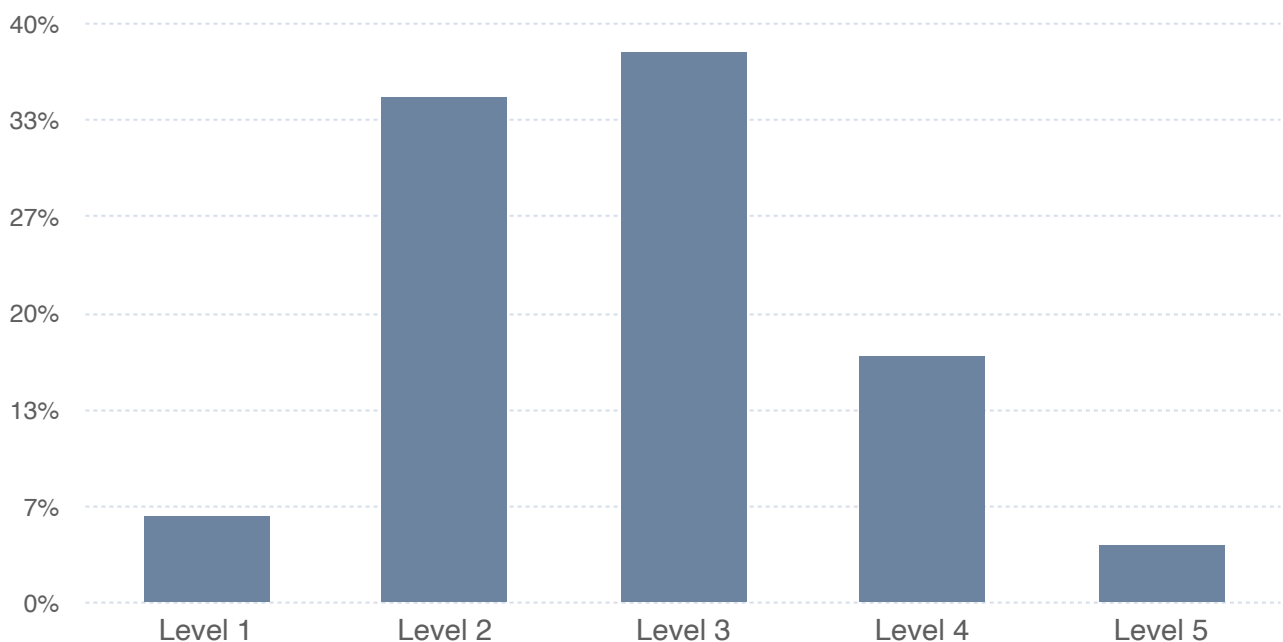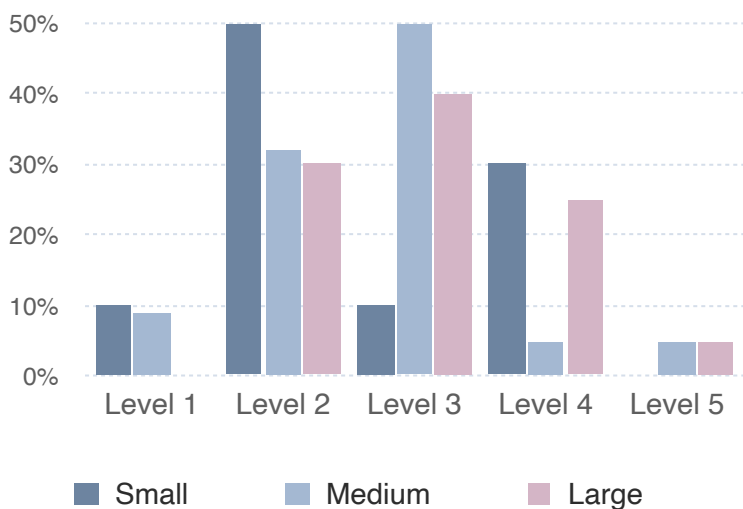
KEY STAT: ALMOST HALF OF THE SURVEYED AIRLINES LACK THE DEEPER KNOWLEDGE REQUIRED FOR SYSTEMATIC DIGITAL OPTIMIZATION

41% of the airlines in our survey don't have the in-depth knowledge and skills required for an ongoing and systematic digital optimization process. These airlines said they have basic online marketing knowledge or basic conversion optimization knowledge (Level 1 or Level 2). On the other hand, only 21% of airlines claimed to have advanced CRO and digital optimization skills within their organizations (Level 4 or 5). All 5 Leaders are in this group.

As in most categories, low-cost airlines are also more advanced when it comes to digital optimization skills, as 80% claimed to have deeper CRO knowledge and skills (at least Level 3) within their digital teams. Only 47% of traditional full-scheduled carriers claimed to have these skills. 25% of low-cost airlines even claimed to have advanced skills (Level 4 or 5). We can also see that advanced skills are mostly the domain of large airlines, where teams are bigger and there are more specialized roles.

It is concerning that almost half of the surveyed airlines don't have the required skills to do digital optimization, improve the digital experience, and increase conversion in an ongoing and systematic way. When we looked at other categories (for example, user & UX research activities, test quantity) and asked airlines about the reason why they don't do more CRO activities, lack of knowledge and skills was stated as one of the main reasons. Conversion optimization requires different roles and skills within a team as well as having a joint goal and a structured process. It is a continuous process of analyzing data (analytics), understanding user behavior (user and UX research), optimization and testing. The tricky part

is that having the right skills within your team is not enough. You need to connect all your digital experts (analytics, product, user research, CRO) and follow a systematic CRO process. By implementing a structured conversion optimization process and creating agile CRO teams, airlines can connect these different roles and skillsets, which will result in higher conversion rates and a better digital experience.

Only 29% of airlines in our survey said they have a documented and structured CRO process in place. 50% of airlines said they have a process, but it's not documented or structured.
This means that a lot of airlines do different parts of the CRO process (for example, digital analytics or UX research), but they could be done in a silo, or they're not running experiments to test and validate their product changes. On the other hand, all 5 Leaders have a structured and documented CRO process in place.

Does your team follow a process for digital optimization (CRO)?

KEY TRENDS: WHAT CHANGED COMPARED TO 2020
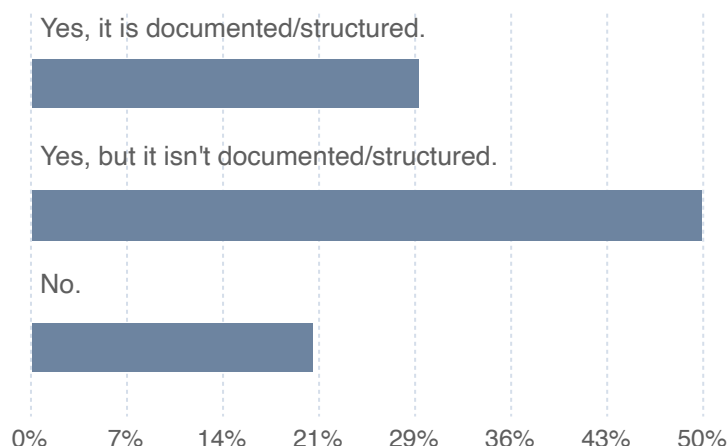
	Level 1	Level 2	Level 3	Level 4	Level 5
2022					
2020					
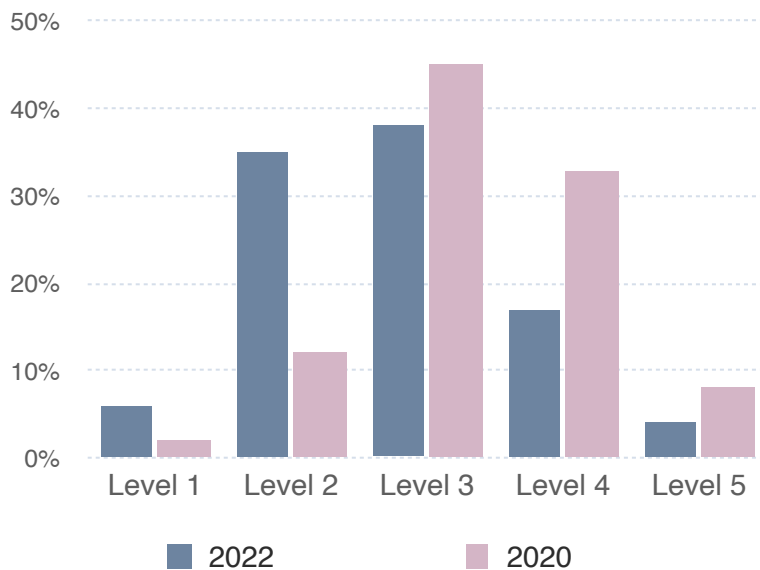
"Skills and Knowledge" is the category where we saw the biggest drop compared to our 2020 survey. By comparing the results of this year's survey with 2020, you can see that the major change was the shift from Level 4 back to Level 2 CRO skills. We see an increase in airlines that have only basic CRO knowledge (Level 2), and a big decrease in airlines with advanced CRO skills (Level 4). During the pandemic, the airline industry has taken a step back – you could argue even two steps back – when it comes to digital optimization skills. This could speak to the fact that a lot of specialized knowledge and skills was lost during the turbulent pandemic times. There was also a big drop-off in airlines that follow a documented and structured process (23% in the 2022 survey, compared to 51% in 2020). This is another testament to the idea that for many airlines, CRO has fallen off the priority list during the pandemic. Many airline teams were either downsized or have yet to re-establish a CRO process.

With COVID-19 and the airlines reducing the digital workforce, a lot of the specialized skills were lost. But this doesn't mean that airlines should skip CRO and experimentation altogether or that they shouldn't follow a structured CRO process. On the contrary, during times of uncertainty and new customer fears, a structured CRO process is the best way to make sure you understand and address the relevant customer friction points. At least in the near and mid-term future, most airlines will probably need to do digital optimization and CRO with smaller teams. However, smaller doesn't necessarily mean worse. **Establishing smaller, agile CRO teams could be an opportunity for airlines to work leaner, faster and smarter.**

A structured, data-driven CRO process can enable airlines to work smarter. See our "Ask the Expert" section for three different personas as an idea for your experimentation program setup and goals. This also means less specialization, so airline digital experts will need broader digital optimization skillsets. Core airline digital professionals (for example, product owners) won't have the luxury of specializing in one discipline only, but will need to have knowledge in different domains (analytics, experimentation, UX research). Airlines with smaller and reduced digital teams will need to embed experimentation and CRO skills into generalist ecommerce and digital roles. (You can see an example of such a role in our "Examples" section.) To do that, airlines will need to take more out of data (see Section IV), understand user behavior better (see Section III), and do leaner and faster optimization & testing cycles.

Airlines with bigger teams will need to harness experimentation and embed it into their core digital teams (see our "Examples" section). The key for airlines that already have specialized experimentation and digital optimization roles **is to increase experimentation velocity.** You can see Section V, "Testing Quantity," for more on how you can do that. Experimentation and a data-driven, scientific approach to managing digital products will allow airlines to attract digital talent, which will be needed to compete with digital giants in the future.

3 DIFFERENT PERSONAS FOR YOUR EXPERIMENTATION PROGRAM

Ben Labay
Experimentation Expert, Managing Director of CRO and Experimentation at Speero by CXL

Based on what you've seen from talking to leaders, when you start with experimentation for real (not just running simple A/B testing somewhere in your digital marketing), what are the best places to start in order to create a really good experimentation program?

"First of all, I have in my mind a framework for different personas of starting a program. There are three personas of how people start. There's **a revenue persona, a "win" persona.** "I want to win now." They want to come in and start testing what they've seen work in some other areas. And this is okay. This is good to start."

They just want higher conversions.

"Yeah, exactly. They come in and they start testing some things. But what happens is it'll quickly hit a ceiling, and it can potentially get perverse really quickly. There are agencies, for example, that work on performance models for charging their clients, like "If the test wins, we get a chunk of that." We get a lot of clients from these agencies, by the way! After they realize how much of a dumpster fire that model is and how many lawyers and red tape it involves and how it doesn't incentivize creative thought. Money is really good at incentivizing root machine process type of work. "I pay you money to do factory work." Money is not a good incentivization tool to get creative work and get inspired and get innovation. We need other tools for that.

The other persona is around customer learnings, which is the one I really love."

Knowing your customers better, understanding their pain points, stuff like that?

"Yeah. If you go into these business operational framework books, like OKR theory of Get Things Done, 4DX, EOS, there's only three goal categories for businesses. It's revenue, customer, and process. All of them talk about all this crazy research they've done with companies, and they all say that customer goals are really where you should aim your company. You should have an aspiring mission for your company; it should be centered around the customer. Then everything trickles from there. Your process and your revenue is derivative.

I like this persona a lot. This is what I call customer experience optimization. They come in starting like, "We're doing user testing. We're doing polls. Let's also use experimentation as a tool to get customer learning." So that's also a good place to start, just thinking about the customer.

The third one, and I'm seeing more and more of this, is what I call experimentation. Experimentation is the moniker that I give that describes the process of intervening in measurement, the process of decision optimization. I give that moniker experimentation, experimentation programs."
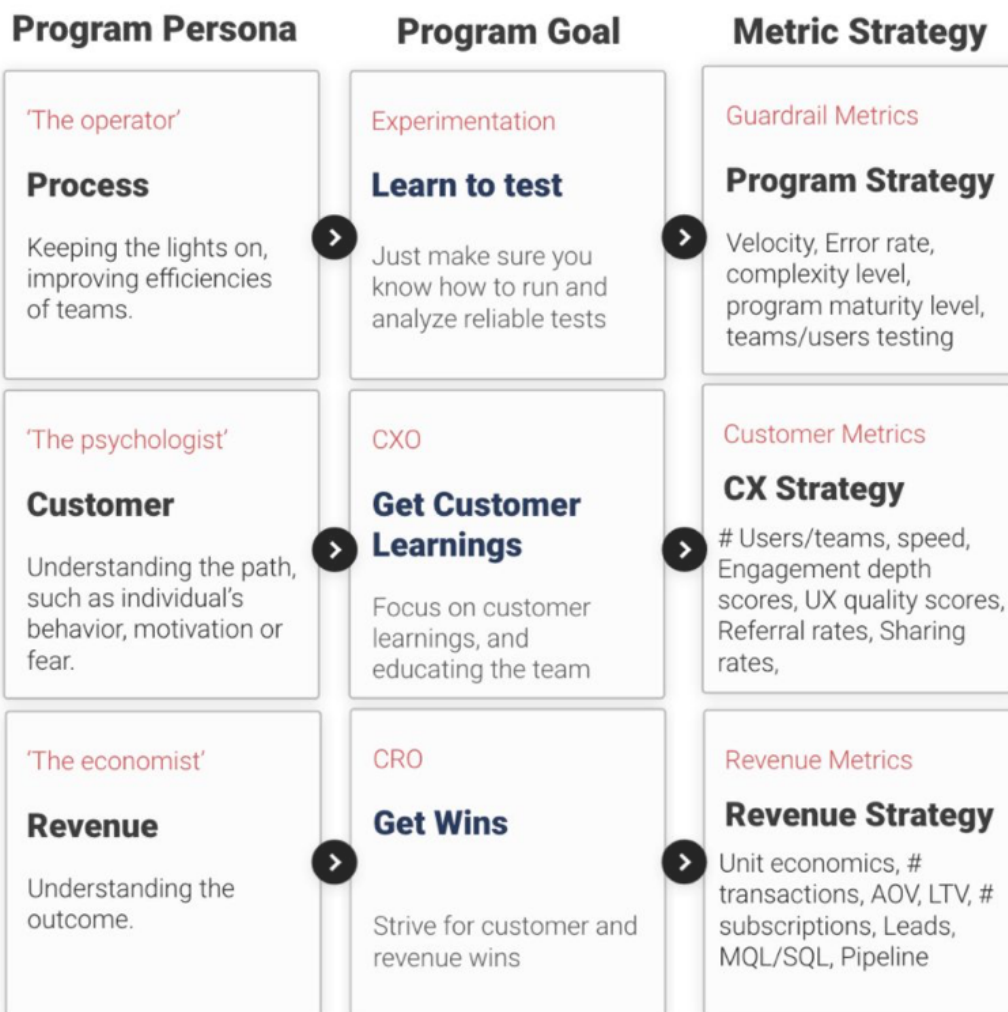
"It involves not only A/B testing, but the decision frameworks, the preregistering, the post mortems. It involves the planning and the road-mapping before the A/B testing. It involves the assessment and integration of product strategy into metric strategy before the planning and road-mapping. So it involves all of those process stages.

We see a lot of bigger companies – MongoDB was a good example, and Miro.com. We work with these companies, and they'll come in and be like, "We're spaghetti testing." That's where they started. They started on one of those two other personas. Let's stop spaghetti testing and let's set up a program."

When you talk about this third persona, it's testing-focused, right?

"It's **testing process focused**. Let's learn to test, and let's have that learning affect our culture. In experimentation programs, velocity is a goal. These are these leading metrics to help us try to stand up higher and create these cultures of innovation. You have a strategic narrative around testing that comes a lot of times from the Chief Revenue Officer of Finance or the CMO, like "I just need more money. I'm metric-focused." We do experimentation to get wins. We make you a ton more money."

Program Persona	Program Goal	Metric Strategy
'The operator'	**Experimentation**	**Guardrail Metrics**
Process Keeping the lights on, improving efficiencies of teams.	**Learn to test** Just make sure you know how to run and analyze reliable tests	**Program Strategy** Velocity, Error rate, complexity level, program maturity level, teams/users testing
'The psychologist'	**CXO**	**Customer Metrics**
Customer Understanding the path, such as individual's behavior, motivation or fear.	**Get Customer Learnings** Focus on customer learnings, and educating the team	**CX Strategy** # Users/teams, speed, Engagement depth scores, UX quality scores, Referral rates, Sharing rates,
'The economist'	**CRO**	**Revenue Metrics**
Revenue Understanding the outcome.	**Get Wins** Strive for customer and revenue wins	**Revenue Strategy** Unit economics, # transactions, AOV, LTV, # subscriptions, Leads, MQL/SQL, Pipeline

Source: Ben Labay, Speero

*Here you can see an example of the eCommerce Product Manager role at startup North American airline **Breeze Airways.** It's an example of how experimentation and CRO skills are embedded into a "generalist" kind of ecommerce role **in a smaller digital team.***

eCommerce Product Manager
at Breeze Airways (View all jobs)
Cottonwood Heights, Utah, United States

Working at Breeze Airways is an exciting endeavor and a serious commitment to bring "The World's Nicest Airline" to life. We work cross-functionally with truly awesome Team Members to deliver on our mission: **"To make the world of travel simple, affordable, and convenient. Improving our guests travel experience using technology, ingenuity and kindness."**

Position Summary

At Breeze, our customer-facing website and mobile apps are critical functions to the operation of our fast-growing airline, and the eCommerce Product Manager is a crucial member of team that develops and builds these channels.

The position will sit at the nexus of our Guests, Team Members, and Executives, as they prioritize the development team's work, build and maintain product roadmaps, and provide vision, direction, and strategy for all upcoming features. They will work in tandem with the Product Management Senior Manager, UI/UX designers, and data architects to use design thinking to build new site features and functionality, help develop new ideas, and champion a relentless focus on a guest-centric website and mobile experience.

Additionally, the eCommerce Product Manager must be a next-level team player, successful at managing relationships and collaborating and influencing across a variety of organizational functions within Airline Operations, Marketing, Merchandising, IT, and others.

Essential Functions

- Develop long-term strategy, vision, roadmap, and priorities for all commercial website and mobile app features
- Own daily and weekly prioritization and product roadmap for the commercial development team
- Hypothesize, research, and gain buy-in for future features in commercial development across multiple channels and platforms
- Put the needs of guests and potential guests at the forefront of the flybreeze.com site and app experience
- Develop and prioritize digital experimentation (A/B tests, multivariate experiments, etc.) to derive customer insights and drive superior product outcomes
- Conduct qualitative and quantitative research into guest and potential guest behaviors
- Collect a wide variety of data to inform product direction, whether in the form of competitive intel, guest behavior, or other business metrics
- Develop concise business requirements, user stories, and feature definitions
- Prioritize features based on guest and business impacts and influence others at many levels throughout the organization
- Coordinate with the Product Management Senior Manager on product development across the company, identifying dependencies, potential impact to your team, and opportunities for to drive larger impact
- Serve as the subject matter expert for the domains in your division and provide guidance to the leadership team into guest needs, business strategy, marketplace dynamics, and competitors
- Achieve performance measures and adhere to established standards in conjunction with Breeze Aviation Group Values of Safety, Kindness, Integrity, Ingenuity, and Excellence

*And here's an example from **Delta Air Lines** of **a specialized Digital Optimization role that works within a large airline digital team.** The Optimization Product Manager's key responsibility is to harness the power of experimentation into key digital product teams: Shopping & Booking, Digital Self-Service, Digital Loyalty, and others. others.*

Optimization Product Manager

Delta Air Lines · Atlanta, GA · 4 days ago · 61 applicants

[Apply ⧉] [Save]

About the job

At Delta Air Lines, we create world-class digital experiences that are customer-focused, innovative, easy to use and revenue-enhancing. The Digital Optimization team plays a critical role in Delta Air Lines' Digital Strategy team.As a Product Manager – Optimization, you will harness the power of online experimentation to glean critical insights that shape the way our customers shop, book and interact with content on our digital channels.By leveraging both your creative and analytical skillset, the team member will work to help foster a culture of creativity and testing, working cross-functionally to drive ideas, assess and prioritize our test backlog, and work to develop, launch, and assess optimization tests.Many of the tests will ultimately drive investment in IT development – implementing changes based on learnings from winning tests.

Primary Functions
- Maintain relationships with digital product teams (Shopping & Booking, Digital Self-Service, Digital Loyalty, and others) and other stakeholders (Loyalty, Marketing, etc.) to stay abreast of business developments and industry trends in order to drive a robust backlog of ideas
- Work with the Digital Tools team, various product teams, and Analytics teams to guide ideas from ideation through technical/design/analytic assessments
- Assess potential return of ideas, and score backlog items based on potential impact, development effort, hypothesis confidence, and strategic fit
- Identify success metrics and design test analytics plan
- Socialize backlog and ensure alignment regarding testing priorities
- Partner with all stakeholders to gain approvals, perform QA testing, and launch the tests
- Utilize Adobe Analytics to assess and monitor performance of tests
- Communicate test results to stakeholders and digital leadership

Design and deploy A/B tests to learn more about our customers and improve the Delta.com experience to drive performance (e.g. conversion, CSAT)

Seniority Level
Entry level

Industry
Information Technology & Services ,
Computer Software ,
Financial Services

Employment Type
Full-time

Job Functions
Product Management , Marketing

USER AND UX RESEARCH

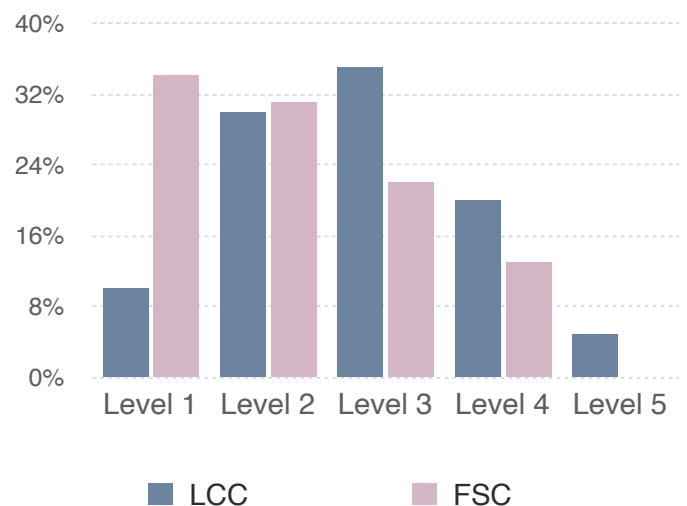# Q: WHAT USER AND UX RESEARCH ACTIVITIES DO YOU CURRENTLY DO?

- **Level 1:** Basic analytics and conversion reports; sales reports
- **Level 2:** Level 1 + advanced analytics reports, session recordings, simple A/B testing, heat maps and click maps, ad-hoc customer surveys
- **Level 3:** Level 2 + regular customer feedback and survey analysis, form analysis, occasional unmoderated or moderated user testing
- **Level 4:** Level 3 + scheduled moderated and unmoderated user testing, customer struggle scores, prototype testing
- **Level 5:** Level 4 + user testing at scale, biometric research, anomaly detection leveraging AI/ML

By Size

Small   Medium   Large

By Type

LCC   FSC
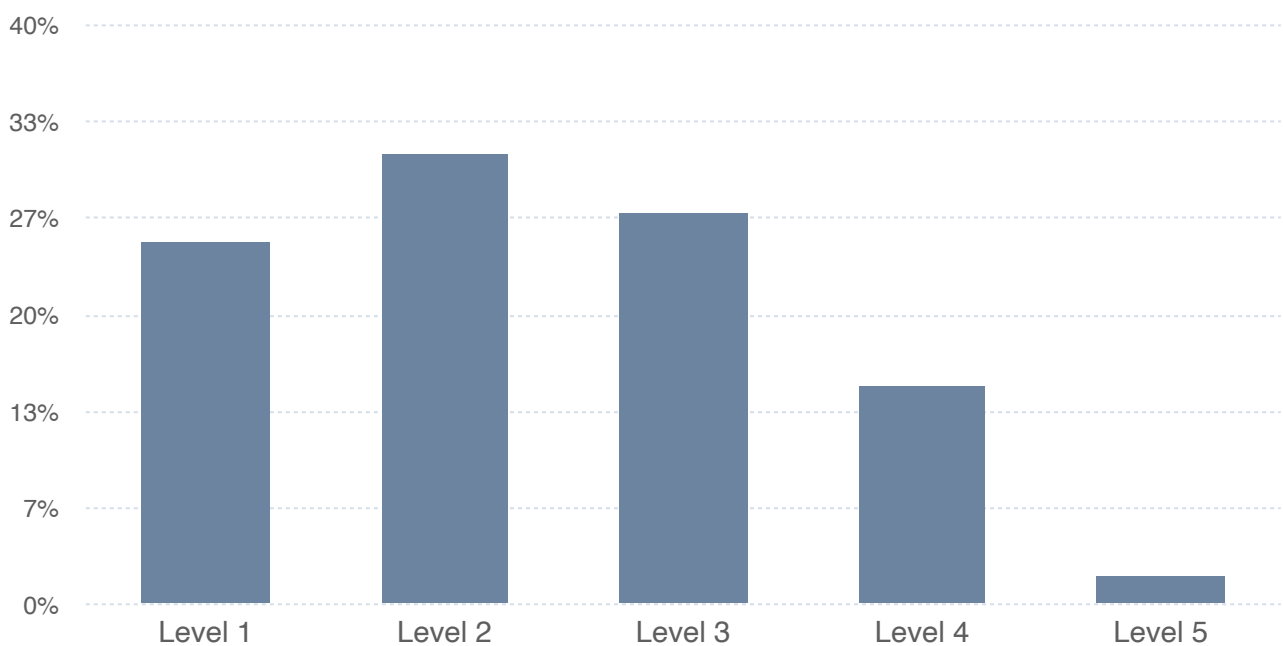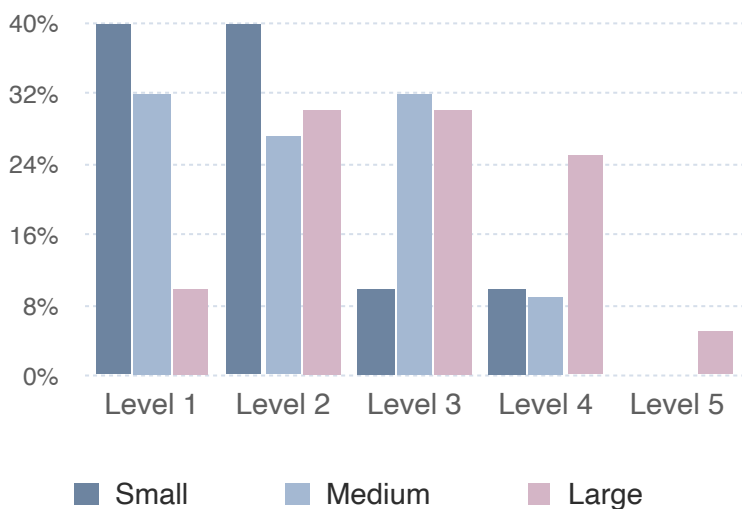
KEY STAT: USER AND UX RESEARCH REMAINED ONE OF THE MOST NEGLECTED AREAS OF DIGITAL OPTIMIZATION

56% of airlines from our survey still don't do any user research activities besides looking at data (Level 1), or they only do simple activities to understand their customers (Level 2). Only 15% of airlines claimed they do systematic moderated and unmoderated user testing activities (Level 4). Test quantity and user and UX research were the areas in which the airlines scored lowest on average across the 8 categories from our digital optimization framework, so these two areas remain the key areas with room for improvement.

In particular, traditional full-service (FSC) airlines really struggle with a user-centric digital approach (this is what user and UX research is all about). 34% of FSC airlines said basic analytics and reports (Level 1) are their only methods of user and UX research. We can't stress enough the fact that analytics is not enough to understand your customer's behavior.

Currently, the majority of the airlines (31%) do advanced analytics reports, session recordings, simple A/B testing, heat maps and click maps, and ad-hoc customer surveys (Level 2). Another 27% of the surveyed airlines do regular customer feedback and survey analysis, form analysis, and occasional unmoderated or moderated user testing (Level 3). However, when it comes to unmoderated and moderated user testing, these are still not typically part of the user research or they are only done occasionally (for example, for bigger website redesigns). Only 17% of airlines do regular, scheduled moderated and unmoderated user testing, which is probably the most important of the user and UX research activities. If you don't do user testing, your hypothesis for optimization or new digital products will be based on guesses and assumptions, rather than on your user's needs.
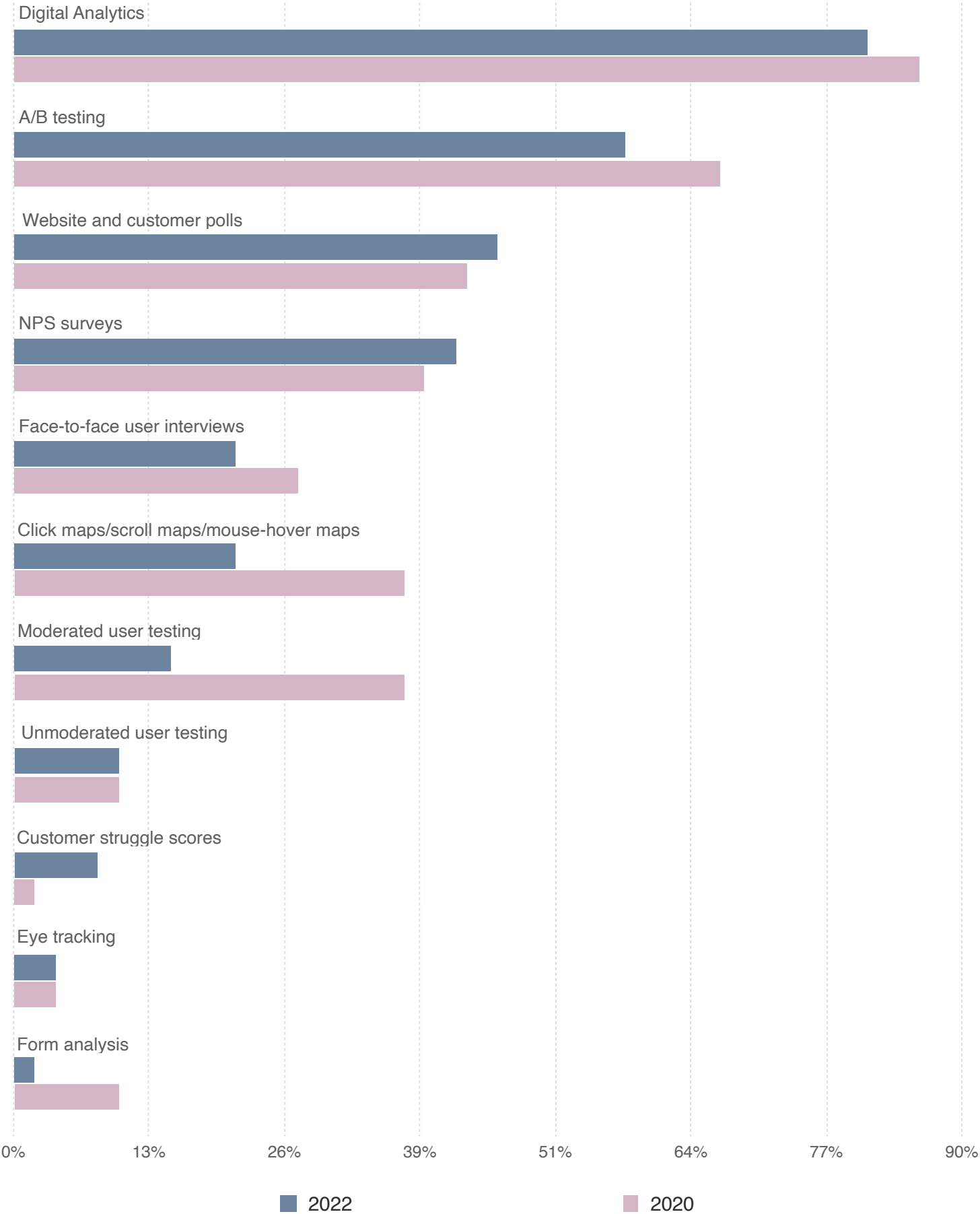
When we asked airline digital optimization professionals in which user research activity they see the most value, we got similar answers to those in our 2020 survey.

Digital analytics (81%) and A/B testing (58%) were by far the most popular user and UX research activities, followed by website and customer polls (46%). There was a big drop-off in moderated user testing, as only 15% of the surveyed airline digital experts identified it as an important activity.

Airline digital optimization experts' reliance on quantitative (data) activities to get user behavioral insights is another indicator that "deeper" digital optimization skills (advanced user and UX research skills) were lost during the pandemic.
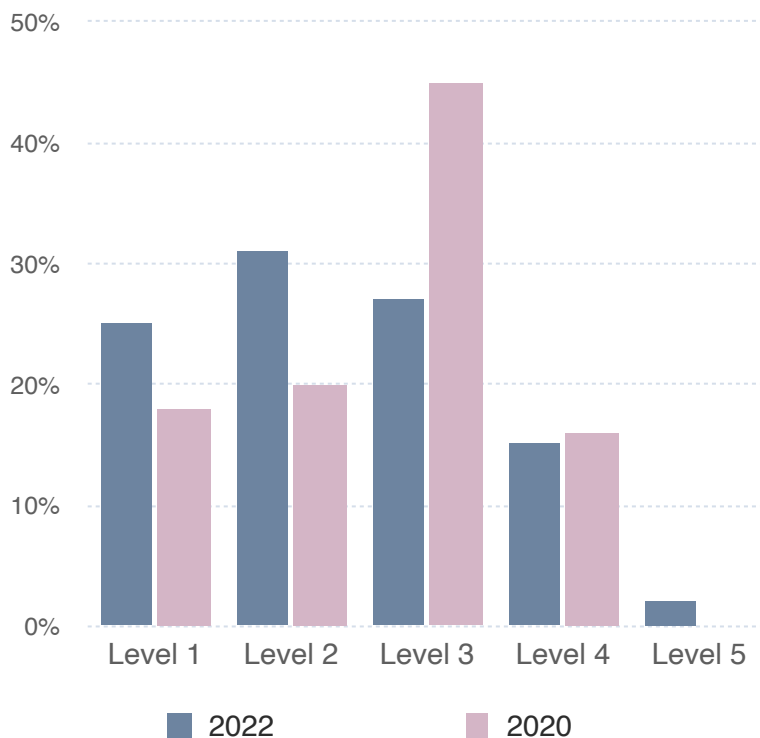
What user research activities help you to understand your users the most? Please select the top 3 that bring you the most valuable insights:

Digital Analytics

A/B testing

Website and customer polls

NPS surveys

Face-to-face user interviews

Click maps/scroll maps/mouse-hover maps

Moderated user testing

Unmoderated user testing

Customer struggle scores

Eye tracking

Form analysis

0%   13%   26%   39%   51%   64%   77%   90%

■ 2022   ■ 2020

KEY TRENDS: WHAT CHANGED COMPARED TO 2020

This area regressed a bit less compared to some other areas (Skills and Knowledge) in our 2020 survey; however, the problematic part is that user and UX research was one of the least advanced digital optimization areas to begin with. According to our 2022 survey, airlines have taken a step back in this area, from Level 3 to Level 2 and Level 1. This is problematic, as it means that even more airlines are relying only on data and analytics to understand their user's behavior. This is not a good trend for an industry that struggles with customer-centricity. Airlines need to go beyond quantitative data: our survey shows quantitative methods (analytics and surveys) are still the most popular among airlines. However, quantitative methods tell you that something is happening (the trend, the WHAT), but don't help you understand the WHY. Airlines need to do more agile qualitative user research activities to complement the quantitative ones.

We can only repeat what we wrote in our 2020 report when the pandemic was just starting: User and UX research is the area of digital optimization where COVID-19 will have the biggest impact. Everybody is speculating about how user behavior changed because of COVID-19, but you really shouldn't rely on guesses and assumptions. Now more than ever, agile and ongoing activities to understand user behavior matter. You'll need to understand your users' fears and motivation and adjust your messaging and UX based on that.

To do so, you'll need to go from project-based, quarterly-based research to ongoing agile research. Our survey shows that most airlines don't do some of the important user research activities (like moderated and unmoderated testing) or do them only on an occasional, project basis. Airlines need to decentralize and democratize user testing and allow more agile user testing. The pandemic forced airlines to be more agile and experiment with remote user and UX research activities. You can find tips on **how you can do remote and agile user research in our "Ask the Expert" section.**

One other area that airlines should explore as a part of their agile user and UX research plan is **Digital Experience Analytics.** Digital Experience Analytics is a mix between quantitative and qualitative research and can help you identify the key bottlenecks in your airline booking funnels. **You can learn more about Digital Experience Analytics at the end of this section.**

HOW TO DO UX AND USER RESEARCH DURING THE PANDEMIC

Diego Brunot
Lead Design Researcher at Walmart, previously UX Lead at American Airlines (2019-2021)

Before you start building new digital products that address your customers' pain points, you must first understand those customers. Doing user and UX research is another aspect of the airline world that changed because of the pandemic. Here is how Diego explained how the American Airlines team did user research to understand new airline user behavior.

"Obviously, we were not able to do the in-person tests that easily. We've got the remote testing tools, so we make greater use of them. They are great because they still maintain contact with our users, our customers. We can do remote unmoderated tests. Let's say we have a prototype or an idea we want to test, and we just want to upload that prototype with a set of questions, or maybe a task if it is a functional prototype. It's something we can put out there and in 24 hours we get tons of people who conduct that test, and the next day you can watch that video and get some powerful insights. You can do the same thing in a moderated test, so you have interviews but instead of having the in-person interview, you conduct it over Zoom.

There is another concept we have embraced in the past year to give us a fresher perspective and help with the process of how we ask the questions differently. If we are struggling to find the right solution or if how we iterate the solution doesn't give us the results, maybe it's the way we ask the

question that needs to change. This is why we really embraced the 'design thinking,' human-centered approach. It's more about the way we collaborate within the team. We're trying to ask different questions, get more participation, make sure we involve different teams very early on and get different perspectives to help frame the problem better. That usually leads to better solutions. Having additional tools that can enhance collaboration in a remote world and having a digital whiteboard are great ways to improve the process."

HOW TO DO UX AND USER RESEARCH DURING THE PANDEMIC

Amanda Stockwell,
UX research expert, LinkedIn teacher, and Diggintravel Airline Digital Academy Instructor

One big challenge of the pandemic is that it makes doing in-person user interviews or moderated user testing more difficult. This is why leveraging remote user research can come in handy in the current situation. Here is Amanda's tip on how to do remote moderated user interviews and testing:

"Remote user research is really powerful, and it can be great for a lot of things. Especially for places like airlines, who are likely to have a user base that's really spread out geographically, it can be really powerful to be able to talk to people not in person. It can be a little bit easier to schedule because you don't need people to meet you at an office or go to a moderation lab. It really allows you to get in touch with people in lots of different places – and people who maybe normally wouldn't participate in research. Right now is an especially interesting time because there's a lot of people who are perhaps furloughed or not as busy with work as they might usually be. I've actually had quite good luck the last few months interacting with people online."

Remote user research might sound like an easy thing to do, but there are some things you might need to be careful about.

"I absolutely suggest some sort of videoconferencing tool to do either one-on-one interviews, or you can do moderated usability tests if you can share screen or have them share yours. I really recommend recording. One thing to be extra careful about, though, is that you don't get the full context necessarily. You can't see their whole body. Sometimes there are some technical glitches. Like if you're working on a prototype and they have to pull it up on their computer that's a little bit slower or configured differently than yours, you have a little less control, especially if you're running something where you have to share screen. I use a tool like Zoom. There are lots of other videoconference tools. Basically, I can share a screen with people if I want to show them anything. I can see their face, which is important, and they can see mine, which helps it feel a little less clinical. It's easier to build rapport. And after the fact – I also always record the sessions – I can go back and re-watch certain parts of it and see what their face was doing and read their body language as best you can. You don't always have great views, but if somebody's grimacing really hard or looks really frustrated, it's pretty easy to tell. Humans in general aren't great at hiding their emotions, no matter what they think."

The other thing to be careful of is that depending on how you've recruited people, if you don't have exactly the right people in your sessions, that can skew your results a little bit. That's actually true regardless of whether it's remote or not, but with a lot of remote recruiting, it can be a little bit harder to know exactly who the people are going to be. I really recommend doing a little bit of extra screening or using a service that does a little extra screening to make sure the people are going to be able to connect, they're going to be able to be heard and hear you, and if you're going to have to share screen, to do a tech check and all that kind of stuff."
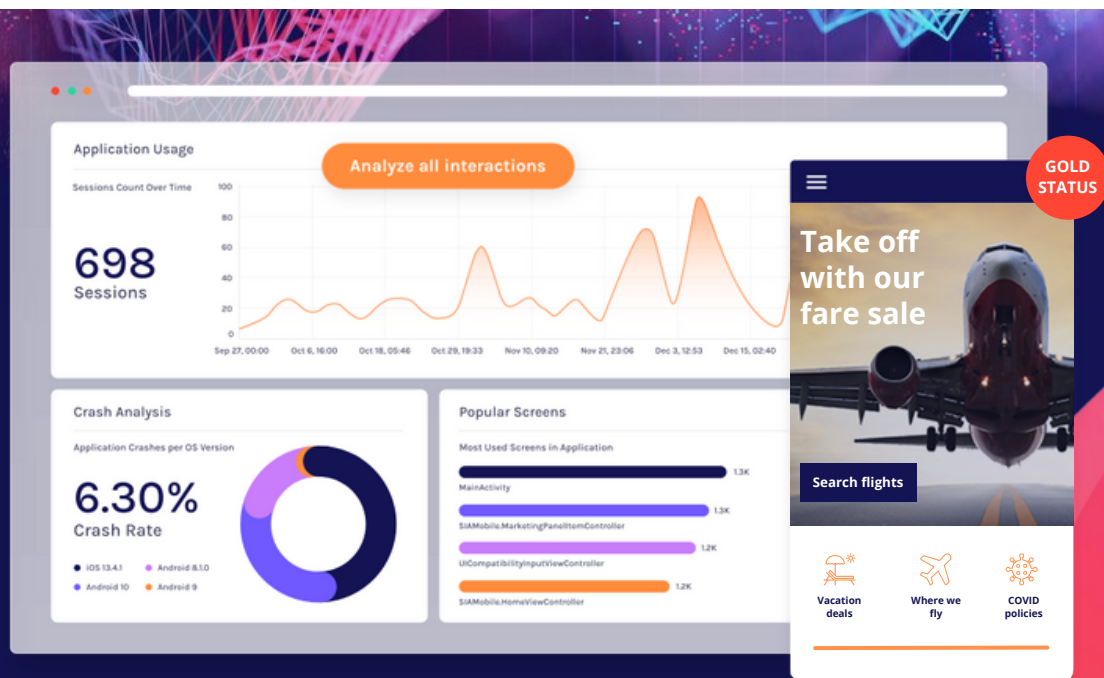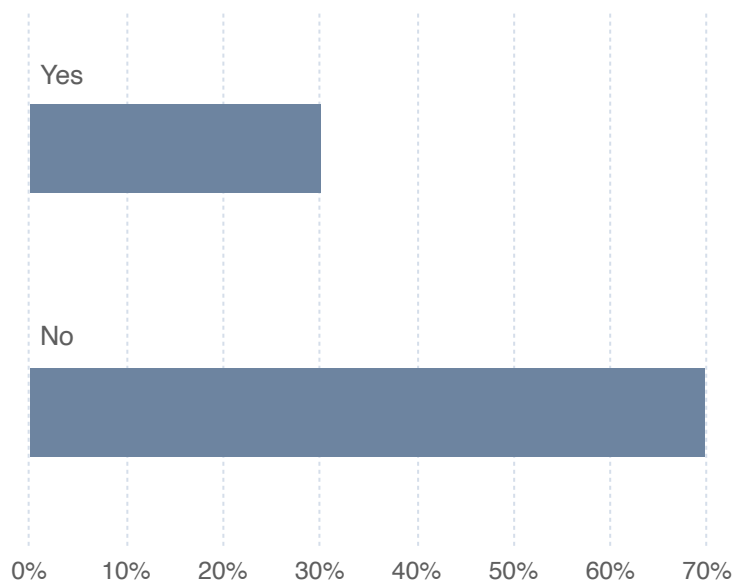
Digital Experience Analytics is a relatively new field that is a mix between digital analytics (Section IV in our research paper) and user & UX research (Section III). Digital Experience Analytics is a great way for airlines to get some user insights into customer behavior.
Our survey shows that most airlines don't leverage Digital Experience Analytics to identify key friction points in their booking funnel. Only 30% of the surveyed airlines claimed to use Digital Experience Analytics for their digital optimization activities. However, 80% of the Leaders said they leverage a Digital Experience Analytics platform to analyze their user behavior.

Read more about Digital Experience Analytics in our next "Ask the Expert" section.

Are you performing any digital experience analytics (with platforms like Glassbox, Contentsquare, Quantum Metric...)?

Explore customer journeys across your web and mobile apps.
glassbox.com

GLASSBOX

WHAT IS DIGITAL EXPERIENCE ANALYTICS AND HOW CAN IT HELP AIRLINES UNDERSTAND THE WHY?

Greg Dowling,
Global Director of Business Insights at Glassbox

"When I think about digital experience analytics, I certainly differentiate it from traditional digital analytics. Traditional digital analytics can provide the "what" – what is happening. For example, I've built a funnel. I see that users are abandoning at Step 3 of this funnel. I can use my digital analytics solution to quantify the number of individuals that are dropping out of this flow. I can understand how often that's happening. I can understand that change over time. But what I don't understand is why. I could begin to make some correlations within the digital data that I have across other variables that I'm capturing during the customer's journey, but being able to visually see the user interactions, watch what the user is clicking on, visually see where within the journey the friction occurs and the struggle point occurs, and highlight directly what that struggle is – things like dead clicks, dead links, rage clicks, form struggles, zig-zag – these sorts of things don't really exist in your traditional digital analytics.

The notion of struggles, you can build events or you can build things that approximate struggles within your digital analytics solution, but you're never really going to be able to see and verify visually what's actually happening. That's why I like to say that we started out with session replay and being able to watch what's happening, but then we built capabilities on top of that session

replay. We are capturing every single click, swipe, drag, everything about the client experience, indexing it, and allowing it to be searched, but then also putting our own machine learning algorithms on top of it to identify core struggles.

At Glassbox, **we identify 20+ different types of struggles** across native mobile and web experiences, and then we're able to surface those visually and overlay those struggles across a journey map or a funnel or individual ad hoc reporting – just understanding how often these struggles occur. I think that's a real differentiator between traditional digital analytics and what we're calling digital experience analytics."

You mentioned 20 different types of struggles. You work with a lot of airline clients. What are the typical struggles airlines have with digital experience analytics? How can you help them understand the "why"?

"Those golden journeys are typically around the booking flow as well as ancillaries, so managing things like baggage, things to purchase prior to flight, Wi-Fi, etc. When they begin to look at the primary golden flows and golden journeys, they look for behavioral struggles. These behavioral struggles can be, as I said, form zig-zags – not knowing and struggling to make it through a standard form. We also see a lot of technical struggles being developed and presented as well."

"For example, API errors, so these requests are either failing or not resolving correctly and impacting the customer's experience and journey. They're unable to get past some of these errors. I think another set of errors is just standard business-related errors. These are UI or user-centered design decisions that make the actual customer purchase flow challenging."

This is about connecting data, connecting the "what" with the "why." You can also revise the errors by checking the session replays and thinking about what users did prior to get to these errors, right?

"Absolutely. That's the power. Being able to visualize and get to the "why." As I stated, we can build these ad hoc reports that list out all of the errors and then the number of times that particular error occurred and potentially the business impact or revenue loss. But then with Glassbox, we can select that error and replay all sessions that had that error occur during their session."

One of the key parts of digital optimization is experimentation and A/B testing. How can Digital Experience Analytics add value in this area?

"The real power that we've been able to see with this testing and experimentation, and to bring it into our entire service, is being able to overlay our journey. Say I have an experiment I'm running and I want to change the way that the page is designed for this one specific population. How is that test performing? Your A/B testing tool will tell you statistical significance towards converting to a specific outcome. Great. But let's take a look at how the journey actually changed between these two experiments. Yes, I landed on a landing page that has this experiment on it, but how did my downstream journey change because I was impacted by that experiment? Or didn't it?"

Usually when we do A/B testing experimentation, we change something on one page in the funnel and then we try to measure through analytics how it impacted that page experience – or, if you're smart and good at analytics, we try to measure how it impacted the whole funnel. But you're saying that you can basically see the whole experience and how it changed throughout the funnel with visualization, right?

"Exactly. You can monitor the entire journey from page to page based on the experiment, and understand which variant resulted in a positive journey and which one resulted in a negative journey. Also, that same leading dimension and overlay, we can apply that to conversion funnels. For those that went through this experiment, how was their conversion affected? And for those that did not go through this experiment or maybe through a variant, how was their conversion?

We could also do that with interaction maps and the in-page analytics. We're able to have two totally different views of a webpage or a native mobile screen, bring them up side by side, and understand based on the experiment first click, last click, click-through rates, overall conversion capability, and influence into business impact."
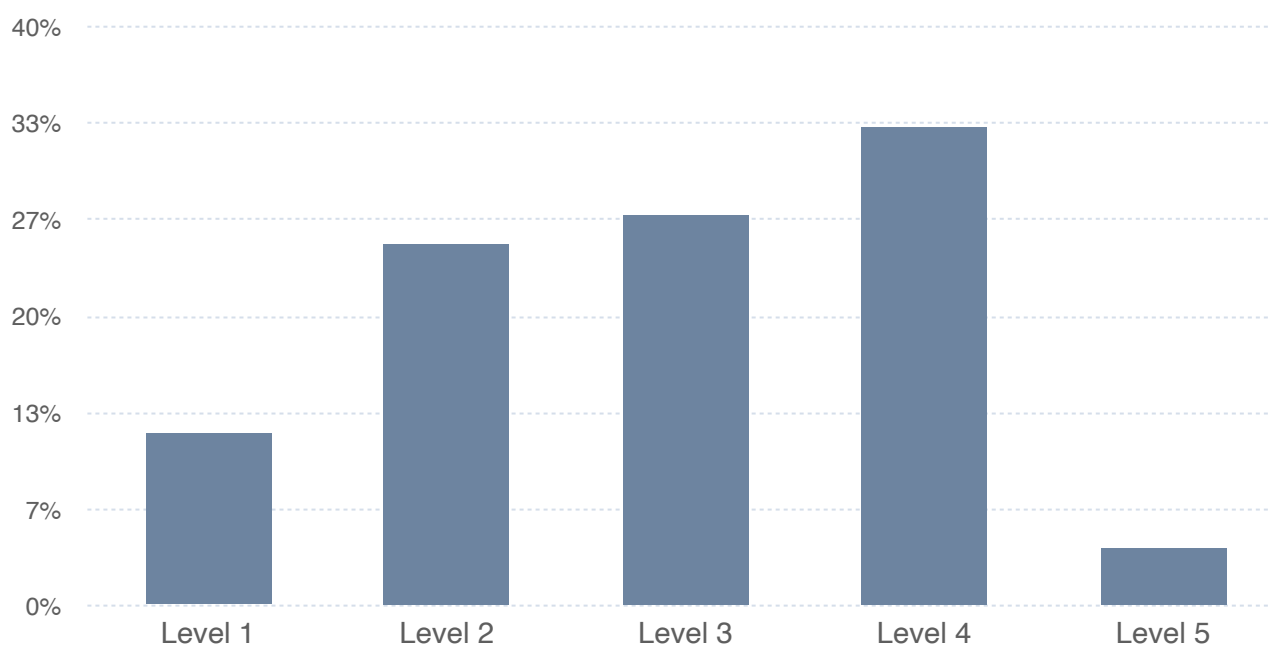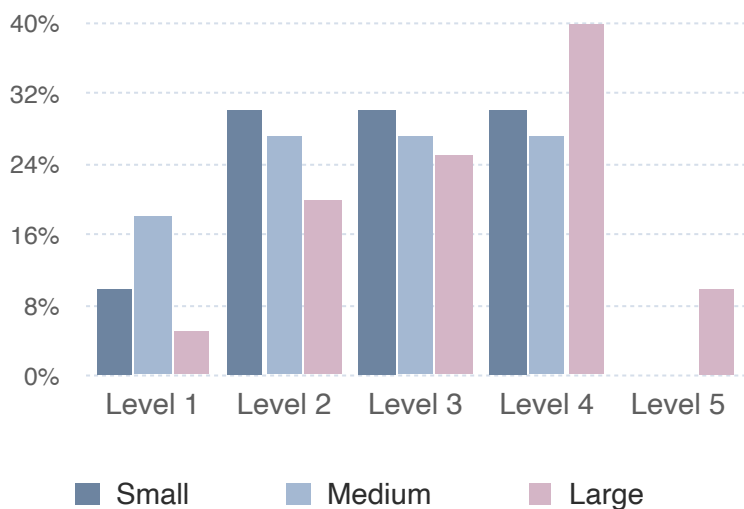
DIGITAL ANALYTICS

# Q: WHAT KIND OF DIGITAL & CRO ANALYTICS DO YOU DO?

- **Level 1:** Basic web analytics (e.g. standard Google Analytics reports)
- **Level 2:** Level 1 + advanced web analytics setup (e.g. enhanced ecommerce for GA, custom goals, events, metrics and simple funnel reports)
- **Level 3:** Level 2 + detailed funnel analytics, attribution modeling, cross-device tracking
- **Level 4:** Level 3 + advanced tools for visualization (like Google Data Studio & BigQuery, Tableau, Qlik, Power BI)
- **Level 5:** Level 4 + data science (predictive analytics, machine learning with e.g. R or Pyhton), anomaly detection leveraging AI/ML

By Size

Small · Medium · Large

By Type

LCC · FSC
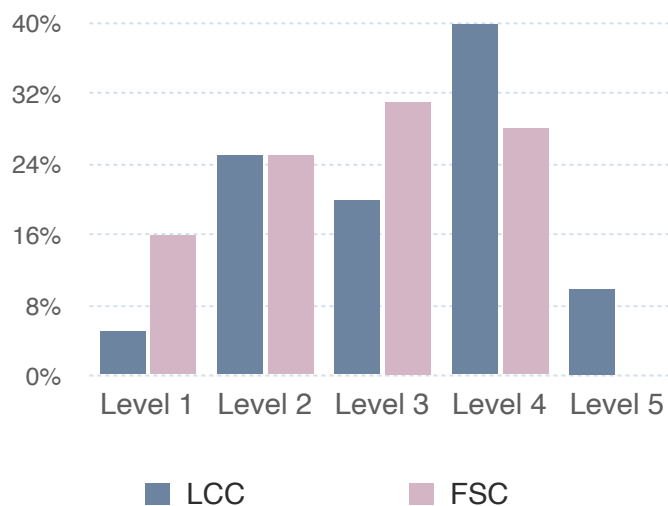
60% of airlines from our survey claimed they do detailed digital analytics in their primary web analytics tool (Level 3) or that they use advanced visualization tools and reports in addition to their main web analytics platforms (Level 4). On the other hand, there are still 12% of airlines that rely on basic web analytics reports (Level 1). 25% of airlines have enhanced ecommerce tracking features enabled in their analytics setup (Level 2), but they still don't do detailed tracking of their booking funnel. Knowing where your users are dropping off in your booking funnel and identifying conversion bottlenecks based on different dimensions (country, language, device type, web browser version, etc.) is crucial for a systematic conversion optimization process.

Like in other areas, we see a gap between low-cost carriers and traditional, full-scheduled airlines when it comes to digital analytics. 50% of LCC airlines are at advanced maturity of digital analytics (Level 4 or 5), compared to only 28% for FSC airlines.

Google Analytics remains the most popular digital analytics platform among airlines. It's followed by its enterprise version – Google Analytics 360 – in second place. The share of airlines who claimed to use GA 360 this year increased compared to our 2020 survey data. Adobe Analytics remains the other platform used by airlines for digital analytics; 15% of airlines in our survey claimed to use it. Google's solution for mobile analytics, Firebase, is the most popular solution for mobile and app digital analytics. There are airlines (mostly large airlines) who use both Google and Adobe platforms and some other, specialized solutions (e.g., for mobile). (e.g., for mobile).

What is your primary web analytics platform (e.g. Google Analytics, GA360, Adobe Analytics / Omniture, Firebase, Monetate ....)?

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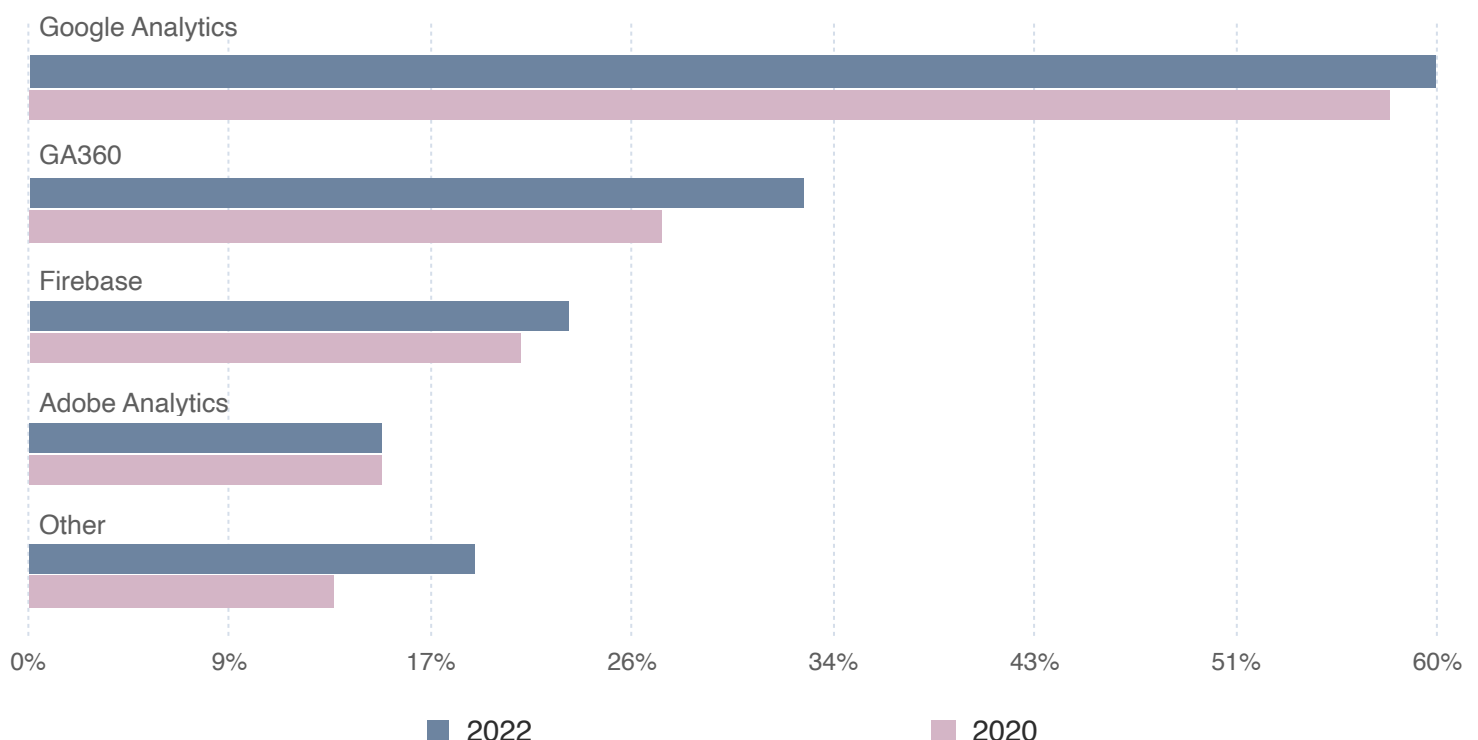
KEY TRENDS: WHAT CHANGED COMPARED TO 2020

Legend: ■ 2022 ■ 2020
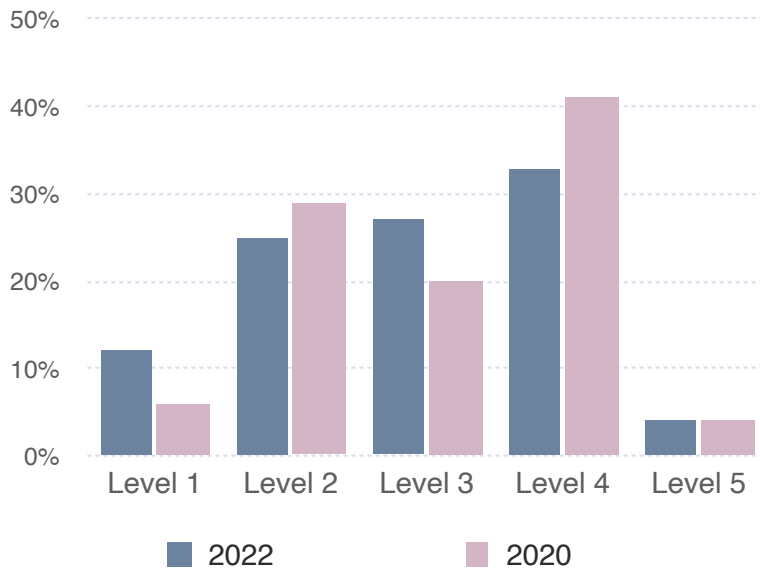
Digital analytics was one of the areas that declined the least compared to 2020. In 2020, we saw a positive trend when it comes to the maturity of airline digital analytics, and this year that level of maturity mostly remained the same. Compared to 2020, we saw a decrease in airlines with higher digital analytics maturity (37% of the surveyed airlines were at Level 4 or 5 in 2022, compared to 45% in 2020). Most of these airlines dropped a level – from Level 4 to Level 3 – as several airlines had to reduce some of the more specialized analytics and data science roles during the pandemic.

Another negative trend was that the share of airlines with below-average maturity (Level 1 or 2) increased slightly to 37% in this year's survey (from 35% in 2020).

The pandemic brought new digital analytics challenges to airlines. Not only do airlines need to track their booking funnels systematically for their CRO initiatives, they also need to measure user interactions across different channels and platforms. Another challenge is that the volatile demand means airlines need to be agile in their

analysis of external demand data sources as well. To do this, airlines will need robust digital analytics models. You can find a case study for advanced digital analytics implementation in our "Ask the Expert" section.

There are a few other often-neglected aspects when it comes to digital analytics – the people aspect is one of these. Too often, we think being better at digital analytics is only about having great analytics tools and good data "crunching" processes. However, the people aspect is really important. Digital analytics people need to build strong relationships with other digital teams and stakeholders. Education, sharing insights and communication, and data storytelling are the crucial last steps if you want to get real value out of your digital analytics. Analytics leader and data storyteller Brent Dykes calls this the "last mile in the analytics marathon."

You can read about **how Air New Zealand's digital analytics team is conquering the last mile in our "Ask the Expert" section.**
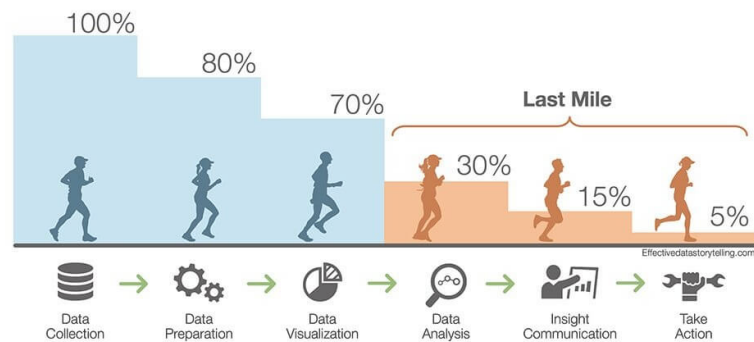
Source: Brent Dykes, LinkedIn post

ADVANCED AIRLINE DIGITAL ANALYTICS IMPLEMENTATION

Liliana García Magaña
Business Intelligence and Analytics at VivaAerobus

Like many airlines, VivaAerobus is on its digital transformation journey. And like other airlines, they see a new, modern website as one of the key parts of that transformation. But what intrigued me most about this process was that Liliana and the team used website redesign as an opportunity to create a new digital analytics foundation.

"Before COVID times, already the digital transformation process had started, and one of the main building blocks for the digital transformation was to renew the website, to switch from a very transactional website to a website that could engage our users, that could really display that we are evolving into a digital business as well. A year and a half ago, the full redesign of the website started, and with this opportunity we decided it was good to also build up our analytical foundation from scratch. We decided to rebuild the full data layer to redesign all the different events we wanted to track, and to also pair it up with the development of the data lake at the same time. So at the same time we were migrating into a cloud data lake, which was also part of the digitalization efforts of the company. We decided to go very specific on the web analytics model so that from now on, we can track every interaction from our consumers and track the end-to-end behavior from the first time they browse on the website or the first time they receive an email all the way until the purchase and the flight."

When Liliana and the team started this, did they optimize (track in more detail) their existing framework? Or did they come up with a new digital analytics framework?

"We redesigned even the framework. Before, we had an event definition like "discovery." It was not very specific for the flows of the user. It had been built as it went. So we decided to rebuild this framework, and then we focused on organizing and building up the data in a way that we could easily understand the user behavior. **We went from having maybe like 10 events to having 35 different event categories.**

All of them are now within a specific business purpose, so we would be looking for a flight search, and we have a shopping experience, which is the moment if you buy or not or you shop a flight or not. And then the booking flow. So we have all of these different flows. It sounds very simple, but we did not have that transparency in the data before. We designed it from scratch. If you think about the business, the question that we wanted to solve with this new data layer and with this new architecture – do we want conversion rate per route or flow? Do we want to deliver data from the search engine? What type of questions do we want to be taken and improved upon this data?

That was the framework. Let's understand the foundation of each part of the purchase of the customer pre- and post-flight. Then the technical part came, but that was already leading that initial redesign of how we want to measure it."

☀ ASK THE EXPERT:

Implementation of the new website and the new digital analytics framework impacted different teams across the VivaAerobus organization. Liliana and the digital analytics team worked with different stakeholders to define what they needed to measure.

"It not only had an impact directly on the business in terms of our revenue, but also the type of data we can create for all of the different areas around us, based on the different needs of different areas. Say maybe operations wants to know how many online check-ins we have. Revenue management wants to know which routes are the most abandoned and why. Marketing wants to know what's being clicked on the homepage, what promotions are having a higher CTR.

Based on all of this, we identified the main building blocks of each part of the business, so what type of data can revenue leverage. Do we have ancillaries? How do we create this? How do we build something strong for ancillaries so they

can know which type are being clicked on, which ones could change their mind? These types of things. Payments, what types of payments are having errors? That's between product and finance. How do we measure the errors? At the first stage of the beta phase and also hard launch, you want to know there are no errors or messages. So how do we track the errors and messages so the product can quickly react when we have those? Post-purchase, how do we know which type of routes are having the intention of adding an ancillary before the flight, but they did not? When it comes to the transaction, we know that already, but all of these were touchpoints before, and we have to push a little bit the user. So we took all of that into consideration for the redesign of the analytical framework of the website."

You can read more about VivaAerobus's digital analytics implementation here: https://diggintravel.com/how-to-implement-advanced-airline-digital-analytics/
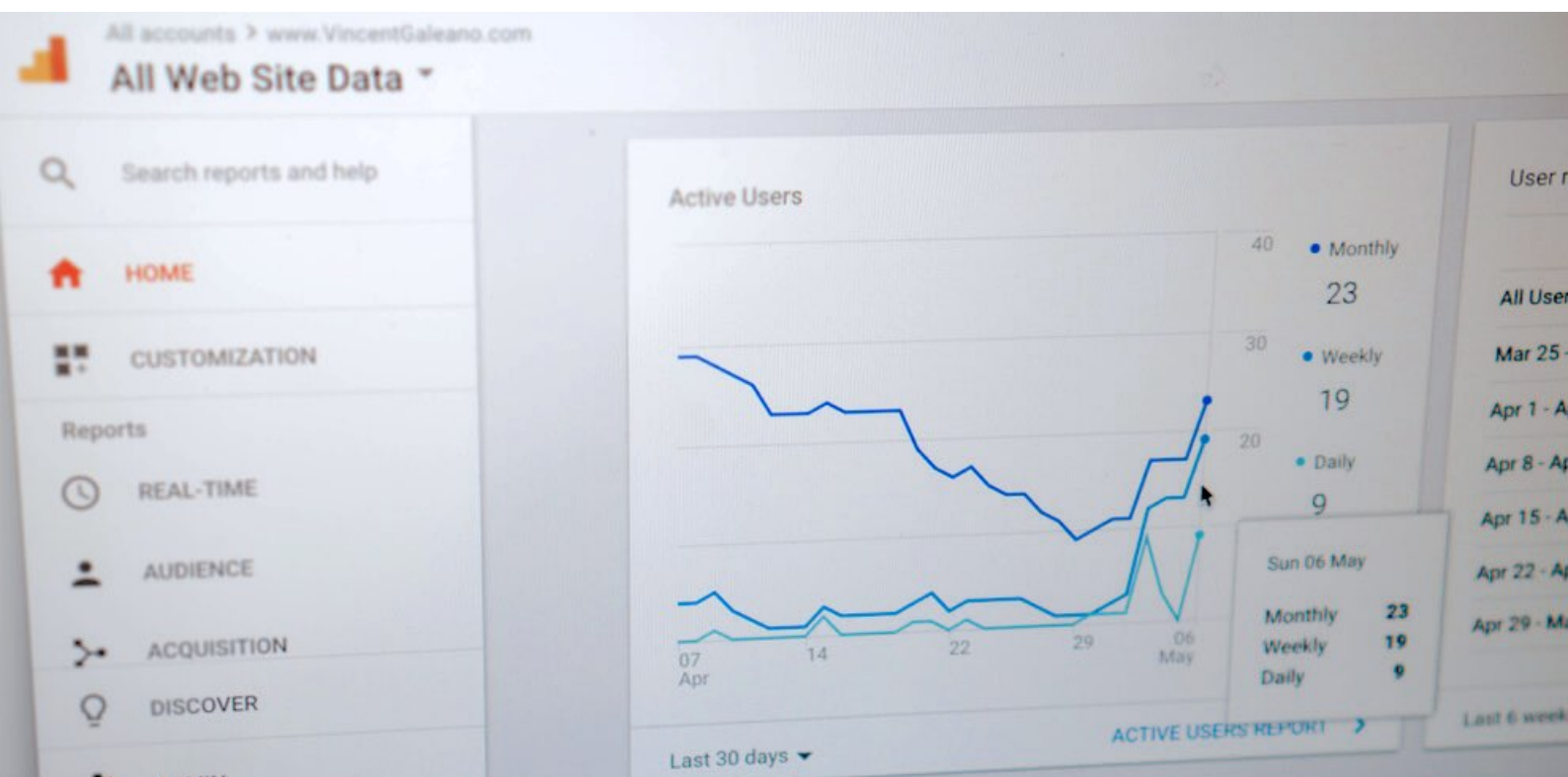
EXPANDING THE DIGITAL ANALYTICS INPUT AND EDUCATING ABOUT THE VALUE OF DIGITAL DATA

Joe Sinclair
Senior Digital Analyst at Air New Zealand

Joe's digital analytics team started building relationships with the first stakeholders – the core airline booking funnel digital team. How did Air New Zealand's digital analytics evolve to new areas and new stakeholders?

"Within the product teams, obviously, the number of product teams we work with has grown. We started with the core teams, and then we tried to effectively touch all of the customer-facing points and some of the internal customer-facing points of the digital journey. Also working closely with digital marketing teams, the ecommerce teams, and also content teams as well. I'm sure I've forgotten many. But all of the teams that come together."

Air New Zealand's digital analytics team input expanded from the core booking funnel tracking to end-to-end measurement of the customer journey. With the broader reach of digital analytics data and more stakeholders involved, the role of the digital analytics team evolved as well. The new part of the job was to educate the stakeholders and help them to take full advantage of the digital data analytics and analytics tools.

"At the start, it was very much that relationship-building. When I think back to some of the initial implementation phases we had, we did get pushback on some of the work because every team has finite resources, and was it the right thing for them to be working on? So we spent time building those relationships and selling that story and then coming back and showing them the value as early on as possible to build that. As it's evolved over time, it's an education piece across the business – making sure that the data's accessible, also that it's understood. We spent a lot of time with the stakeholder teams training them and educating them in digital analytics data so that they understand what's available, how to use it, and just make sure it's front-of-mind for them and easily accessible. We obviously use the data a lot ourselves, but we're only a few people. The more people using the data and understanding how to use the data, the more value you're going to get out of it."

One of the key things Joe and the digital analytics team learned is that it's not enough just to look at and crunch the numbers. One of the most important parts of the airline digital analyst job is to be not only technically sound, but also able to communicate and share the value and even be proactive in explaining the insights that can be gained.

"There's the whole data storytelling side; an insight's only going to be as good as how you explain it. You absolutely need those soft skills. Really important."
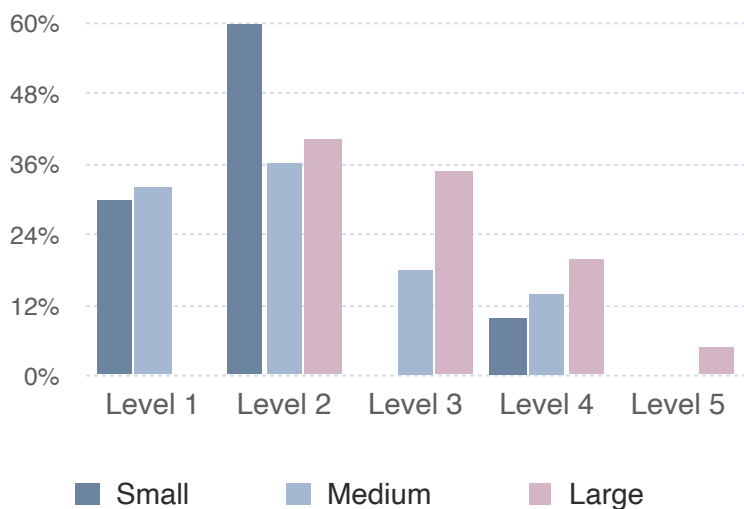
TEST QUANTITY

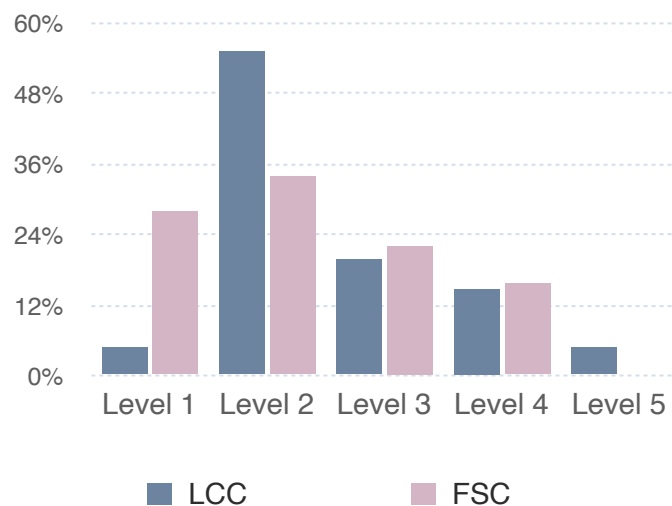# Q: HOW MANY TESTS AND EXPERIMENTS DO YOU DO?

- **Level 1:** None or minimal: 1-2 tests per quarter
- **Level 2:** Ad-hoc testing or project based: 1-2 tests per month
- **Level 3:** Regular and planned testing: 2-5 tests per month
- **Level 4:** Interactive testing: 5-10 tests per month
- **Level 5:** Disciplined testing: 10+ tests per month

By Size

Small   Medium   Large

By Type

LCC   FSC
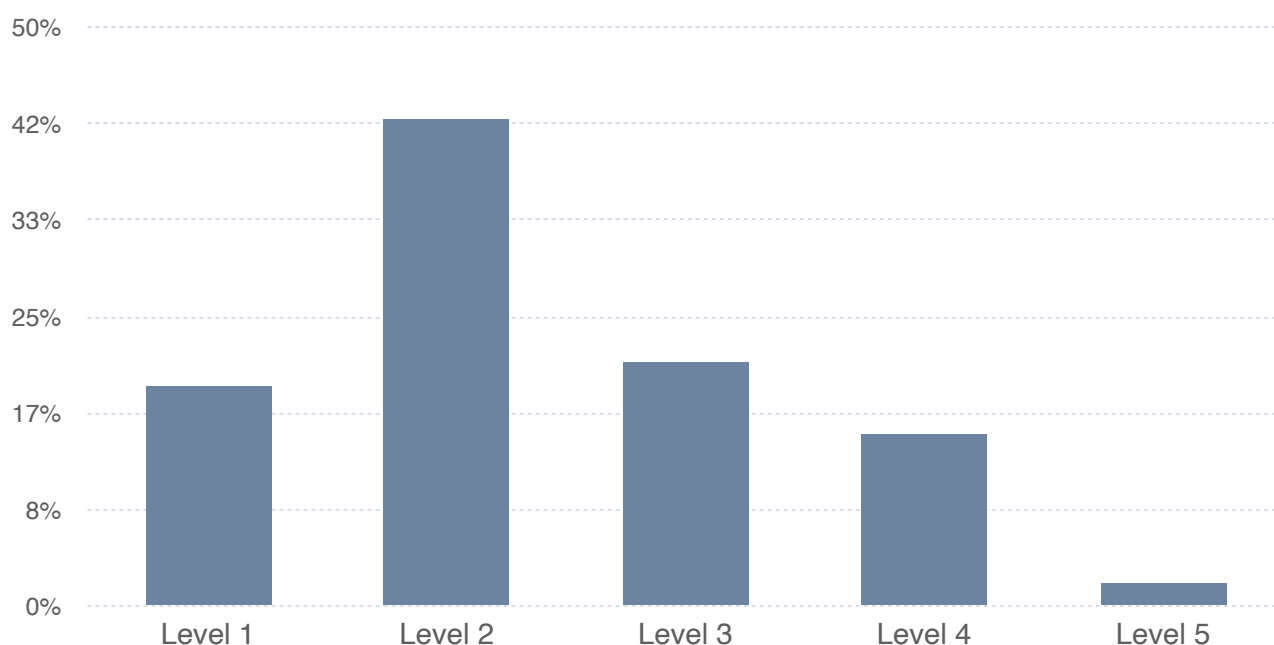
KEY STAT: AIRLINE TESTING AND EXPERIMENTATION IS DECLINING; MORE THAN 60% STILL DON'T TEST REGULARLY

Unfortunately, testing remains one of the biggest pain points and the lowest ranked digital optimization area. **62%** of the airlines from our survey don't test (19% are at Level 1) or do it only on an ad-hoc basis (42% are at Level 2). Testing quantity is especially problematic for small airlines (90% don't test regularly) and medium-sized carriers, where the share of airlines that don't test regularly is 68%.

Testing quantity is especially problematic for traditional (FSC) carriers; 28% don't test or do only minimal testing (Level 1). The majority of low-cost (LCC) airlines only do ad-hoc or project-based testing (55% are at Level 2 and do 1-2 tests per month). Testing quantity is really where digital optimization leaders distinguish themselves from the rest. But during the pandemic, even most of our airline CRO Leaders dropped their experimentation velocity from 5-10 tests per month to 2-5 tests per month.

We'll repeat the key message about experimentation from our 2020 survey here:

A/B testing does not equal digital optimization, as some of the "growth hacking" experts would like to portray conversion optimization. Digital optimization and CRO is much more complex, with other key areas, as you can see in our framework. However, testing and experimentation is extremely important for your optimization and growth. The more you test, the more you learn, and only systematic testing results in long-term conversion growth. What's more, testing is more important during the pandemic, as user behavior is changing and past data is way less reliable. You can find insights from two experts about **why running experiments is crucial if you want to understand and benchmark your performance in the "Ask the Expert" section.**

Because of the pandemic, airline digital teams have a lot of valid excuses for why they're not experimenting and doing regular testing (see next section). It seems like a lot of airline digital teams are always between new, big projects, and there's no time for experimentation. Over the last few years, I've had many discussions with airline digital people about their digital platforms. Many of them talk about big projects like a new website, a new front-end, a new booking engine. But they are stuck in these year-long evaluation cycles, RFPs and long implementation cycles that can take several months, even years. The problem with long digital projects without testing and validation is: what happens if, after six months, the project isn't gaining the right traction? Once you've invested so much time in it, the digital team is going to have a much harder time pivoting or divesting completely from the program, and few are willing to pull the plug at the end of a 1-year new booking engine project. In the end, you have to implement it even if it doesn't work better than the prior version.

We believe that the pandemic should bring a new mindset shift to how airlines operate. **Long projects should be replaced by fast, data-driven cycles of research, prototype building, testing and optimization – similar to Finnair's 12-week cycles we showed you in Section I.** This should be the first step. For bigger airlines with many digital product teams, scaling up your experimentation should be the goal. You can find **a case of how IBM increased their experimentation velocity at the end of this section.**

KEY TRENDS: WHAT CHANGED COMPARED TO 2020
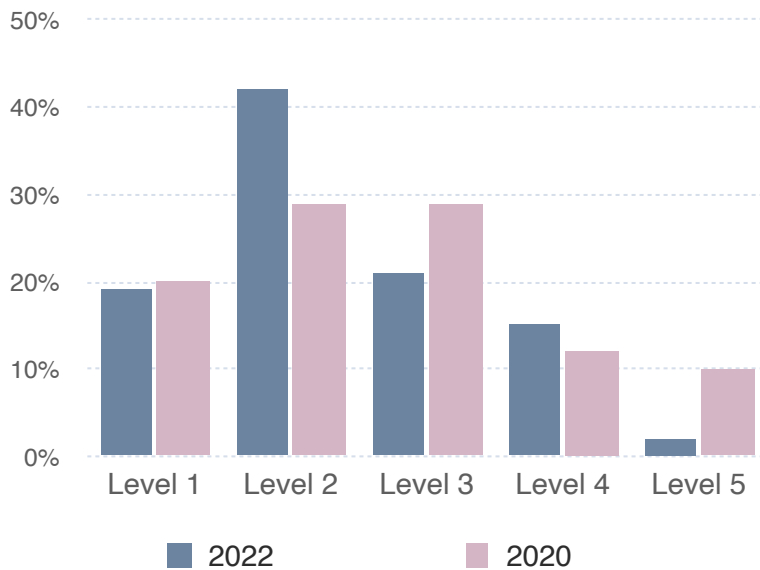
If we compare our 2022 results to the results from our 2020 survey, we can see that the biggest shift happened from Level 3 (regular and planned testing: 2-5 tests per month) back to Level 2 (ad-hoc testing or project based: 1-2 tests per month). This means that most airlines had to scale down their experimentation volume because of the pandemic. The shift from regular to ad-hoc, project-based testing is problematic because it means tests are being done for big projects and redesigns, if they're done at all.

Most digital optimization professionals identified **lack of resources** as the main reason they are not running more experiments. **Platform limitations and other priorities** were the other two most stated reasons that prevent airlines from running more experiments.

What prevents you from running more A/B tests and experiments?
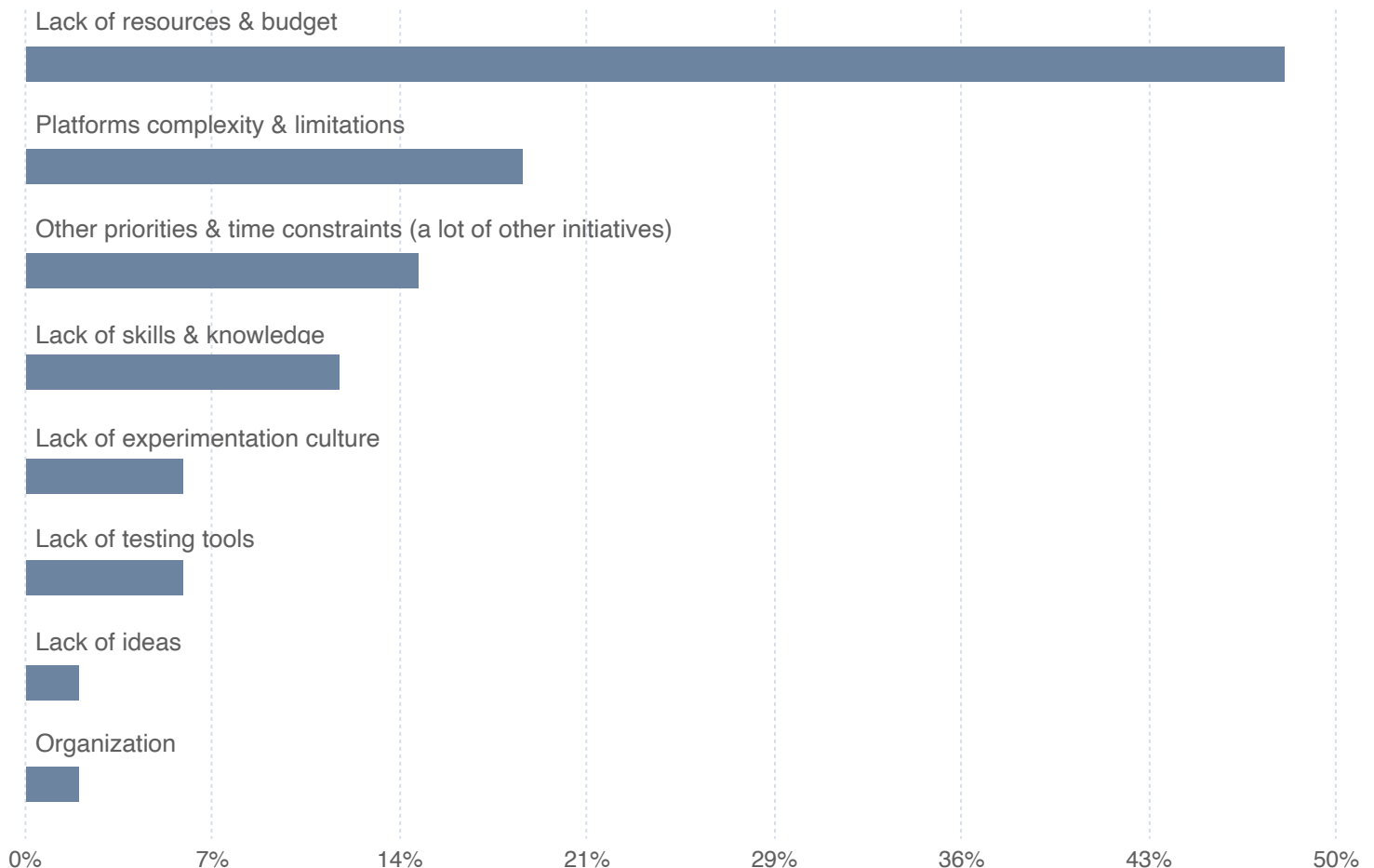
Inflexible digital platforms and booking engines that don't support experimentation have been common themes in our CRO surveys during the last five years. Yet A/B testing capabilities are still not at the top of the requirements list when airlines build or buy new digital platforms. Running an experiment is often viewed as one of the projects that is fighting for priority and resources with other projects, instead of being a key part of the process of implementing new digital product or optimizing existing ones.

As we stated in the prior section, the pandemic should be an opportunity for a paradigm shift in how airlines develop and optimize digital projects.

A lot of airlines want to build on the shift towards ecommerce that happened during the pandemic and finally make their direct booking platforms their main sales channel. To do so, airlines will need to adopt CRO and experimentation as one of the key digital processes.

You can find **examples of modern airline digital roles that include experimentation in the job description in our "Examples"** at the end of this section. Let 2022 be the year where we get rid of what our past CRO research contributor and **experimentation leader Shiva Manjunath calls the "Excuses to Not Test" calendar.**

'Excuses to Not Test' Calendar 2022

January	February	March
We need to figure out our yearly roadmap first	We don't have budget for any testing/research tools	We can't design any tests, we have to prioritize designing this new functionality

April	May	June
The data team found a huge bug - even though we want to test, we can't trust the data right now	If we test it, it will take time. We have to roll this out ASAP	We can test on these pages! Just kidding, I forgot we have to roll out some brand updates, we can't test until those changes are made

July	August	September
We can't build any tests right now, we have to prioritize engineering to roll out this new feature	Our project manager quit - we can't even think about testing now	Our data tracking broke again

October	November	December
It's nearing the end of the year - we have revenue goals to hit, we can't test!	Do we even have time to get the test build then run before the end of the year?	Everyone is on holiday - we'll try again next year

Source: Shiva Manjunath, Speero

WHY RUNNING EXPERIMENTS TO UNDERSTAND PERFORMANCE IS CRUCIAL DURING THE PANDEMIC

Joe Sinclair
Senior Digital Analyst at Air New Zealand

How is the Air New Zealand digital analytics team connected to the CRO team? How do you work together? How do you help them with optimization and experimentation?

"We're actually all one team within Air New Zealand. Our team is the digital analytics and optimization team. Within that team, we have specialist analyst roles, but also specialist CRO roles as well. It's always been intertwined, as it were. From an analytics perspective, that's supporting the CRO program in terms of building the right measurement framework, understanding what the core KPIs should be for understanding performance with tests. But then from an analyst's perspective, I want as much of my recommendations and insights to funnel through the CRO program because that's the way we can 100% prove the value."

So, analytics is not enough to understand performance and to really understand what's happening in your booking funnel. When you make changes or perform digital optimization, the last step (testing) is the validation part, right?

"Yeah. You can get so far with the analytics, but in the current state of the travel world, with so much changing on a month to month or day to day basis, you can't really look back at last year's

performance anymore and say "We think this is a 6% improvement" because those benchmarks aren't really there anymore. Thank God that CRO is there and can remove all that knowledge and tell us."

Basically, you can A/B test against the current state, not compare before/after.

"Exactly."

When you do optimization, you're analyzing the data and the behavior, trying to see where optimization areas can happen; the challenge now is that you don't know what the benchmark is anymore (because of the big drop-off in traffic and conversion during the pandemic). As a data analyst, how do you handle this huge hole we have in our data?

"It's definitely a challenge. CRO, as I said, solves some of that."

WHY RUNNING EXPERIMENTS TO UNDERSTAND PERFORMANCE IS CRUCIAL DURING THE PANDEMIC

Lukas Vermeer
Experimentation leader, Director of Experimentation at Vista, previously Director of Experimentation at Booking.com (2019-2021)

One thing the airline industry is facing right now is this huge disruption and change because of the COVID-19 pandemic. Should we test and challenge the assumptions that we had before even more now? Should we test even more? A lot of the benchmarks are gone. How do you look at it?

"I think so, yes. With an upheaval and a catastrophe this big, it's almost inevitable that some consumer behavior or some dynamics have shifted forever. I don't know what those things are, but I'm pretty sure that something has changed. Something of this magnitude will have an effect. So it's even more important that we figure out, are the things we're doing still relevant to our customers? They may have been relevant two years ago. Are they still relevant now, or has something changed about the way our customers interact with our product?

The other aspect that you touched upon briefly is this idea of we're standing still. I want to challenge that a little bit. Do these companies mean that they're making no more changes whatsoever? Are they honestly not adapting their product? That seems like an untenable position.

The world is changing very quickly. We should be adapting our product. If we're adapting our product in such an uncertain environment as we have at the moment, then it's all the more important that we actually test what the impact of the changes are. Like I said before, any change that we make to the product is essentially an experiment. The only choice is whether we measure what the impact is.

Now, I know what people are saying. They're going to say, "Well, the world is so much changing at the moment that if we run an experiment and we find that people enjoy this feature, that tells us very little about whether they will enjoy it one year from now." This is the question of generalizability. The things that we learn now, are they going to be relevant one year from now?

That is a genuine concern. I understand that this is a concern and that an experiment might not be able to tell you very much about the future. But it will tell you something about the now. And because we're so much in an uncertain environment, it's all the more important that we pay attention to the impact that our changes are having on our users now, because we really do not know how people will behave in the current conditions."

Digital leaders have modern digital roles that include experimentation in all key digital roles (product owner, analytics, user & UX research, development). Here are some examples from various airline roles that include experimentation and testing as a part of the job description.

Analytics and Data Science – AirAsia

Principal Data Scientist, Experimentation
Bengaluru - Alpha 3

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Job Description

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Upload Your Resume And See Jobs That Match Your Skills And Experience

Upload Your Resume

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Job Description

Why AirAsia?

Are you ready to take off and be part of the Allstar employee? Whether you're applying for a developer, customer happiness or crew, at AirAsia we act as One AirAsia.

AirAsia Center of Excellence (CoE) for Data Science is a technology centre that works on innovative long-term projects across various companies in the AirAsia group, including Airasia.com, BigPay, Teleport, BigLife, RedBeat Ventures, OurShop, etc.

What You'll Do

- Design and implement automated Bayesian A/B testing to power AirAsia's experimentation platform across various businesses in AirAsia group
- Play a key role in formulating, scoping, implementing, and evaluating data science initiatives
- Mentor and help data scientists across the organisation to run experiments, get trustworthy results and make good decisions

About You

- At least 5 years of relevant experience as a data scientist
- A strong grounding in statistical methods, controlled experiments and Bayesian A/B testing
- Hands-on in data science projects, and provide guidance and coaching to the data science team
- Hold yourself and others to a high bar when it comes to experimentation and data science
- Programming experience in Python and Hadoop/Spark, and SQL working proficiency
- Thrive in a collaborative environment involving different stakeholders and subject matter experts

Front-end Developer – Eurowings Digital

Eurowings Digital
3,407 followers
33m • Edited • 🌐

• • •

Hey! My name is **Jess King** and I am a Frontend Developer at **Eurowings Digital**! I began working for Eurowings Digital in January 2020 as a Frontend Developer for our Data & BI team to develop innovative A/B tests and have since transferred to one of our main developer team. My current role is a fun, dynamic learning experience where I share my testing knowledge with my colleagues to help us live our company value of "Power of Proof". I also actively contribute to our developer team effort to improve the technical quality and advancement of our product! I love my role at Eurowings Digital because I feel that I have a respected voice in how our application develops and grows as well as the trust to carry out complex development tasks that only help me improve my skills as a Frontend Engineer.

Happy travels,
Jess

User Experience Researcher – Delta Airlines

User Experience Researcher

Delta Air Lines · Atlanta, GA 6 days ago · 30 applicants

Full-time · Associate

10,001+ employees · Airlines/Aviation

28 connections

Actively recruiting

Apply **Save**

About the job

We are seeking a User Experience Researcher to join Delta's Digital eCommerce team. The role will oversee research initiatives that support digital product strategy. This person will be responsible for designing, executing and presenting user research insights and recommendations to the Digital Channels product organization, internal, and external stakeholders. Product scope will cover a wide range of research methodologies; including, but not limited to in-lab and remote usability testing, heuristic evaluations and ethnographic studies. It is important that the candidate has a professional, confident, and polished demeanor; is outgoing, articulate and passionate about user research; and able to work well with large product teams. The person in this role will lead Director level meetings and should be able to present research findings and recommendations in a clear manner.

Key Responsibilities

- Collaborate with product owners and design agency to define and prioritize user experience research objectives.
- Design, conduct, analyze, and present different types of user research studies, including but not limited to lab-based and remote usability studies, heuristic evaluations, surveys, navigation testing, eye tracking, benchmark analyses, A/B testing, and online customer panels.
- Run multiple concurrent user research related projects, managing competing priorities
- Ensure effective communication of quantitative and qualitative research findings, including synthesizing them into concise actionable recommendations and telling the user's story.
- Track and communicate insights and metrics to project teams and senior leadership.
- Create and maintain relationships with vendors and other external business contacts
- Train and mentor new members of the team, including those with no prior user research experience
- Act as a subject matter expert for usability perspective within the team, evaluating new and existing experiences and applying known principles across these experiences
- Follow how the industry is transforming, staying up to date on UX research best practices. Always looking for ways to improve the research and the deliverables.
- Be the voice of our users providing recommendations to ensure we are creating data-driven user-centered digital experiences.
- Practical knowledge of UX research methods and practices, including an understanding and appreciation for both qualitative and quantitative methods, including statistical analysis
- 2+ years of experience planning, conducting, analyzing, and presenting the results of UX research with various qualitative and quantitative methodologies
- A self-starter, organized, with ability to work in a faced paced environment managing multiple projects concurrently with tight timelines with attention to detail and accuracy in all work.
- Where permitted by applicable law, must have received or be willing to receive the COVID-19 vaccine by date of hire to be considered for U.S.-based job, if not currently employed by Delta Air Lines, Inc.
- Masters or PhD in human-computer interaction, Human Factors, Cognitive Psychology, Usability Engineering, Information Science, or a related field
- Familiarity with prototyping tools (ex. iRise, Axure, Invision) preferred
- Experience with UserZoom, Tobii eye trackers preferred

Optimization Manager – Spirit Airlines

The Optimization Manager will be responsible for the end to end online guest experience with the intent of driving up revenue and profit though A/B testing merchandising and funnel optimization.This role provides both proactive and reactive analysis which will help to drive overall business and enhancements to the guest experience, including segmentation and personalization strategies across marketing channels, mobile and desktop websites. This role interacts with various teams across the organization to provide analysis and recommendations that will lead to data driven optimized guest experiences.

Responsibilities

- Act as primary testing and optimization point of contact, consulting and supporting various business partners in the development of their optimization roadmaps and the design of specific actions.
- Maintain and proactively monitor live experiments and ensure that appropriate metrics and segments are accurately implemented, while consolidating and sharing findings across teams and verticals.
- Be a reliable source of expertise for optimization tools and offerings including keeping up to date with industry trends, services and technologies.
- Contribute to the creation of procedures and governance for a successful global optimization program at Spirit
- Build and maintain C-Level facing dashboards and reports
- Relentlessly communicate, coach, evangelize, document and share best practices to colleagues across the company.
- Be a liaison with several cross-functional teams, co-creating learning center from optimization insights development and delivering results.
- Collaborate with both technology and optimization platform teams to integrate new methodologies and tracking through our Optimization Analytics tools.
- Maximize conversion rate and operating margin through A/B testing.
- Continue Spirit's journey into personalization IE offering 1-1 marketing to guests based on information we are aware of.
- Drive Online Merchandising Real Estate and Strategy.
- Manage content and publishes changes to images and copy to Spirit.com.
- Shape customer journey/experience from discovery to conversion.
- Owns eCommerce goals and understands levers that move sales/profit.
- May perform other responsibilities as assigned. Responsibilities and duties may change when circumstances dictate (e.g. emergencies change in workload, rush jobs or technical developments).

*This is a post by Ben Labay, experimentation leader and our contributor, that shows **how IBM scaled up their experimentation program.***

*IBM has increased the volume of their experiments from **less than 100 experiments per year to more than 2,800.***

Ben Labay · 1st
Managing Director / CRO & Experimentation @ Speero by CXL (Hiring!)
18h · 🌐

6 years ago, IBM did 97 tests in one year. All tests went through a single gatekeeper, in the IT department.

3 years later, they did over 2,800 tests in a year. What happened?

Ari Sheinkin, IBM's head of marketing analytics at the time, took over experimentation. With support from leadership...he changed a lot. He led the change.

But how? This is so hard.

How do you get departments and people not incentivized to test, to test?

Product owners are 150% booked, and their KPIs or OKRs don't support or need experimentation to be tracked. Their bonus' don't rely on experimentation. So how??

Ari Sheinkin figured this out.

- installed easy-to-use tools,
- created a center of excellence to provide support,
- introduced a framework for conducting disciplined experiments,
- offered training for everyone,
- conducted an initial "testing blitz" during which the marketing units had to run a total of 30 online experiments in 30 days.
- held quarterly contests for the most innovative or most scalable experiments.
- BIG ONE = tied part of marketing units' budgets to experimentation plans
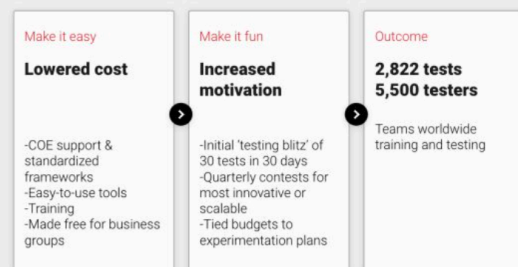
His broad steps:
1. Make it easy (lower friction, increase accessibility)
2. Make it fun (increase motivation, contests and money)

The outcome was innovation. 2,822 tests involving 5,500 employees.

This is a great case study in democratizing innovation. Doesn't get enough press coverage.

Here are three key pillars of the IBM initiative to democratize and scale up experimentation. Source: Ben   Labay, Speero

IBM Experimentation Case Study

| Make it easy	Make it fun	Outcome
Lowered cost	**Increased motivation**	**2,822 tests 5,500 testers**
-COE support & standardized frameworks -Easy-to-use tools -Training -Made free for business groups	-Initial 'testing blitz' of 30 tests in 30 days -Quarterly contests for most innovative or scalable -Tied budgets to experimentation plans	Teams worldwide training and testing

TOOLS

Q: WHAT TOOLS DO YOU USE FOR YOUR DIGITAL OPTIMIZATION ACTIVITIES?

- **Level 1:** Basic web analytics platform, performance monitoring
- **Level 2:** Level 1 + advanced web analytics; simple A/B testing tools (client-side); simple user research tools
- **Level 3:** Level 2 + advanced customer research tools; customer experience analytics tools; simple personalization tooling
- **Level 4:** Level 3 + advanced A/B testing tools (server-side) or own testing platform; project management tool for optimization
- **Level 5:** Level 4 + own testing platform embedded in the core digital platform; advanced personalization tools; predictive analytics & optimization tools
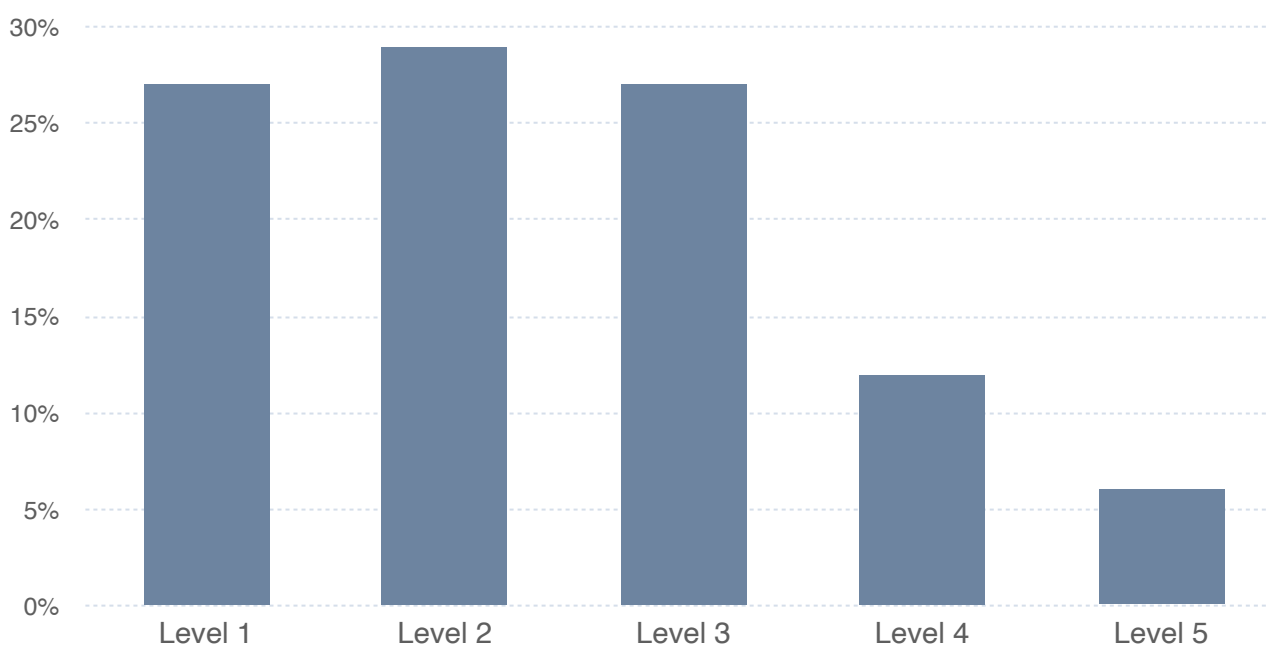
By Size
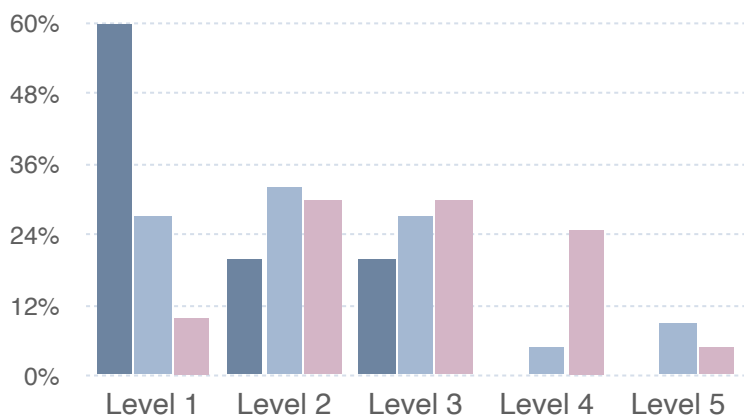
Small Medium Large

By Type
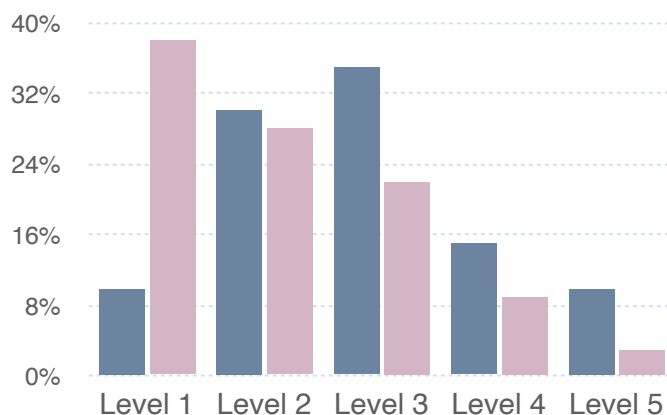
LCC FSC

KEY STAT: MORE THAN A QUARTER OF ALL AIRLINES RELY ON ANALYTICS AS THEIR SOLE DIGITAL OPTIMIZATION TOOL

27% of the airlines claimed they don't use a tool for testing (Level 1) and rely on a basic web analytics platform for their digital optimization activities. The next group of airlines (29%) claimed that they use simple A/B testing and user research tools (Level 2). On the other hand, 18% of airlines use more complex server-side A/B testing tools or have even built their own testing platforms (Level 4 or 5).

Similar to other areas, there is a big difference between low-cost and traditional, full-scheduled carriers. A large group of FSC airlines (38%) is at Level 1, meaning they use digital analytics for their digital optimization activities. 60% of the LCC airlines use advanced tools (Level 3, 4 or 5), while this share is 34% for FSC airlines. Small airlines

lag behind when it comes to digital optimization tools. 60% of small airlines are at Level 1.

Looking at your digital analytics data is not enough if you want to do systematic CRO. You need to do systematic user research and testing as well. Implementing at least simple A/B testing, digital experience analytics and simple user research tools should be the next step for all airlines that don't use such tools at the moment.

The following chart presents which option airlines chose when it comes to testing platforms.

Do you use A/B testing tools (Google Optimize, Adobe Tests, Optimizely, Oracle Maxymiser, VWO...) or do you have your own testing platform?

■ 2022   ■ 2020
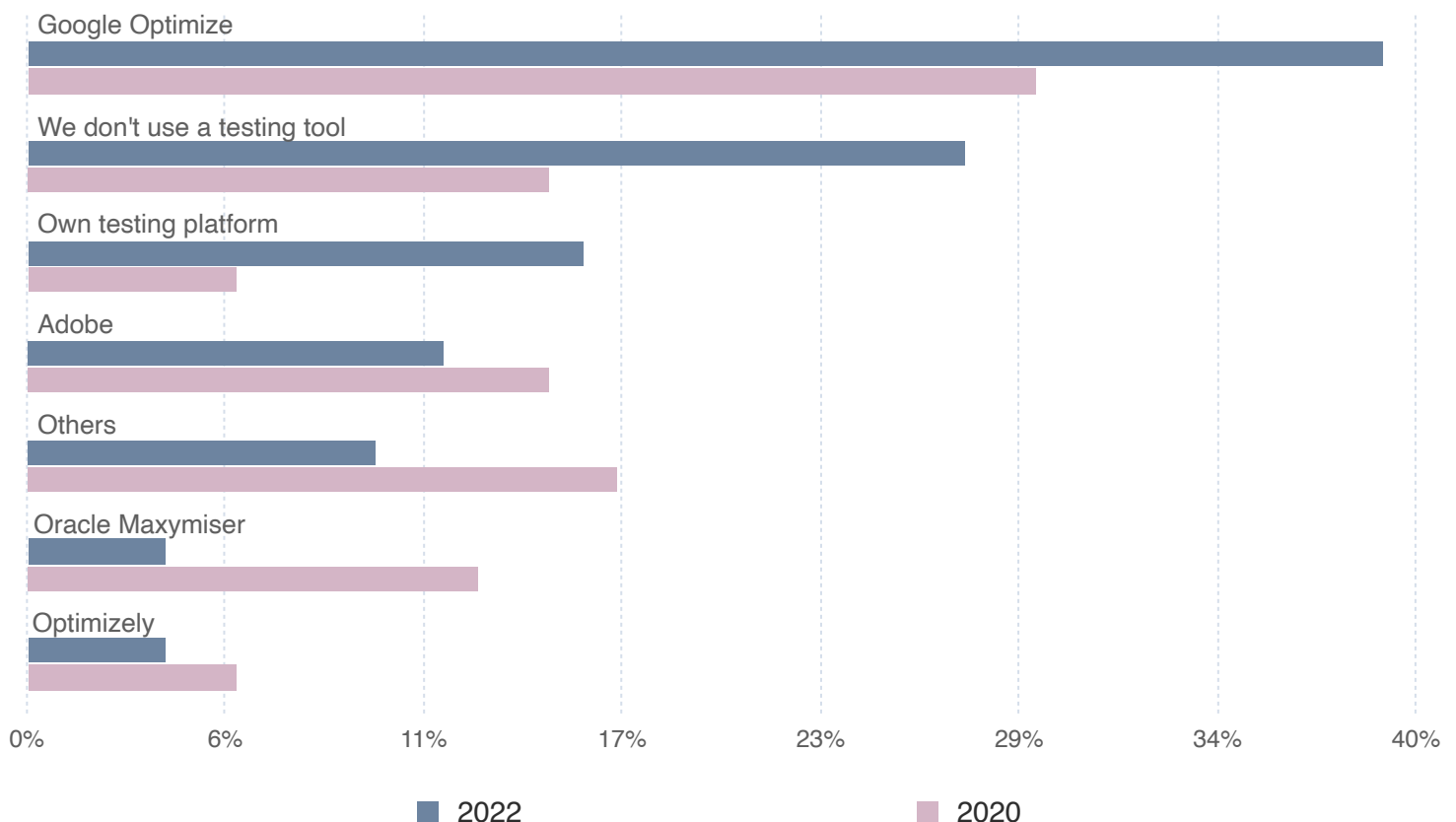
Currently, the vast majority of airlines are using third-party vendors to run tests and experiments. Google Optimize increased its share as the most popular testing tool among the airlines, followed by Adobe testing tools. The popularity of Oracle and Optimizely testing tools dropped compared to our 2020 survey.

Only 16% of carriers said they have their own testing platforms (or that they use a combination of their own and a third-party platform). 60% of the Leaders claimed they've built their own testing platforms so they can be more agile with their experimentation initiatives.

When planning on building a digital optimization and experimentation program, a testing platform is one of the key elements you need to consider.

Do you use a vendor (third-party) or do you build your own testing platform? Do you consolidate all digital optimization tools (analytics, digital experience analytics, testing) under one vendor or do you use many different ones?
How will testing and the testing platform be integrated into your digital product development process?

Large organizations like Microsoft and Amazon as well as travel digital giants like Airbnb, Uber, Booking.com and AirAsia have all built their own testing platforms. Testing capabilities are the core of their digital platforms and product development, and they run thousands of tests. However, these are digital companies that have only digital products, and as such they are not the right comparison for most airlines (especially small and medium-sized ones).

You can find an **insight about using tooling in the "Ask the Expert" section and examples of different digital optimization tooling setups in the "Examples" section.**

KEY TRENDS: WHAT CHANGED COMPARED TO 2020
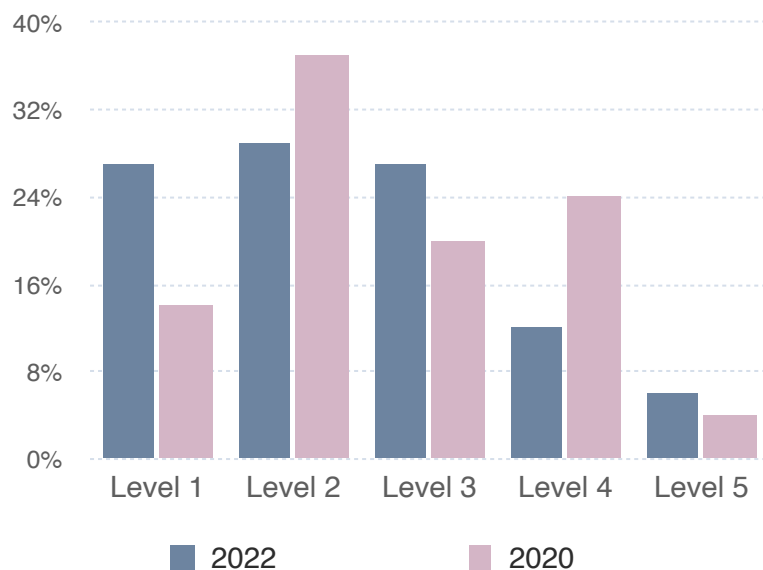
As in other areas, airlines took a step back in 2022 when it comes to digital optimization tools. We see two major shifts when we compare this year's results to 2020. The first one was the move for more advanced airlines from Level 4 down to Level 3, meaning fewer airlines are using really advanced testing tools or are working on building their own testing platforms. We talked about how some of the more specialized knowledge was lost during the pandemic in our Skills and Knowledge section. We see a similar trend here, with the drop-off in the usage of specialized and advanced digital

optimization tools. The other shift we see is the move from Level 2 down to Level 1 for the less advanced airlines. This means that some of the airlines that had started to explore using simple digital optimization tools prior to COVID had to cut back or stop entirely during the pandemic. The share of airlines that are not using a testing tool increased to 27%, compared to 15% in our 2020 survey.

The other thing we analyzed in our survey is whether airlines use personalization tools and whether they combine CRO and personalization activities within the same team. 69% of the airlines in our survey claimed to combine digital optimization (CRO) and personalization activities within the same team. This is a good sign, as in our opinion, personalization, digital optimization and experimentation should work hand in hand.

39% of the airlines in our survey said they use a personalization engine. This share dropped from 51% in 2020. Several airlines said they're planning to implement a personalization tool in 2022. Personalization tools can help airlines improve their digital experience and increase conversion rates, but personalization initiatives should still be implemented within a structured CRO process.

Do you combine digital optimization and personalization activities (within the same team)?
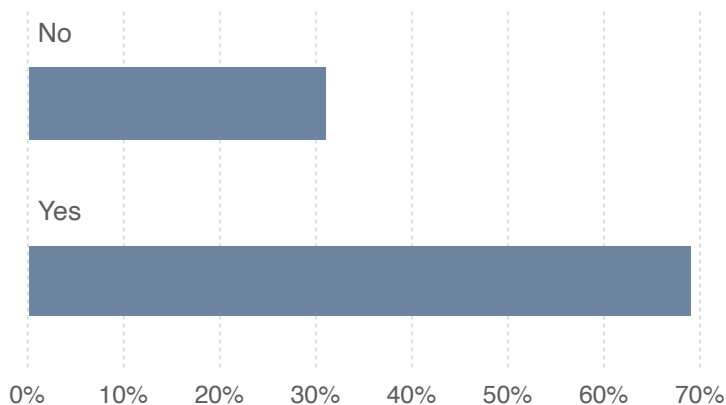
Do you use a personalization engine?
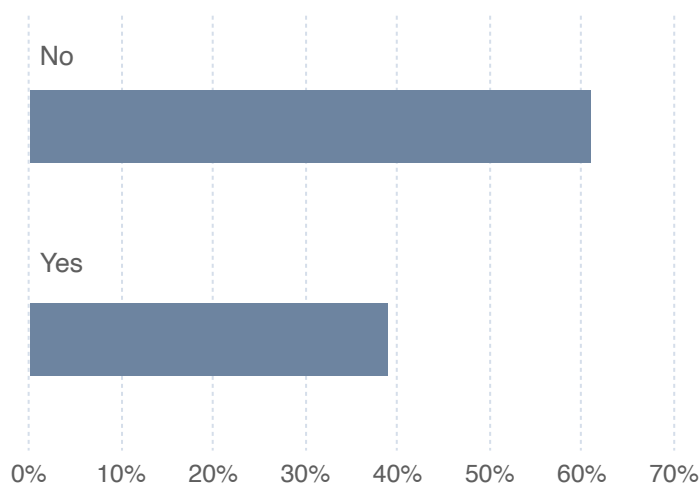
Personalization, personalization tools and machine learning algorithms are often portrayed as the silver bullet solution that will automatically solve all problems. In our opinion, however, this is not the case; airlines need to go step-by-step: analyze data, find segments and patterns, understand users, adjust messaging and user experience and test to validate. Especially now, with limited resources, airlines cannot afford huge personalization initiatives for which they cannot prove positive ROI. The best way to be good at personalization is to leverage experimentation to learn if and how your personalization initiatives work. Form hypotheses for personalization scenarios, then do agile experiments to understand the impact and calculate the ROI of personalization initiatives.
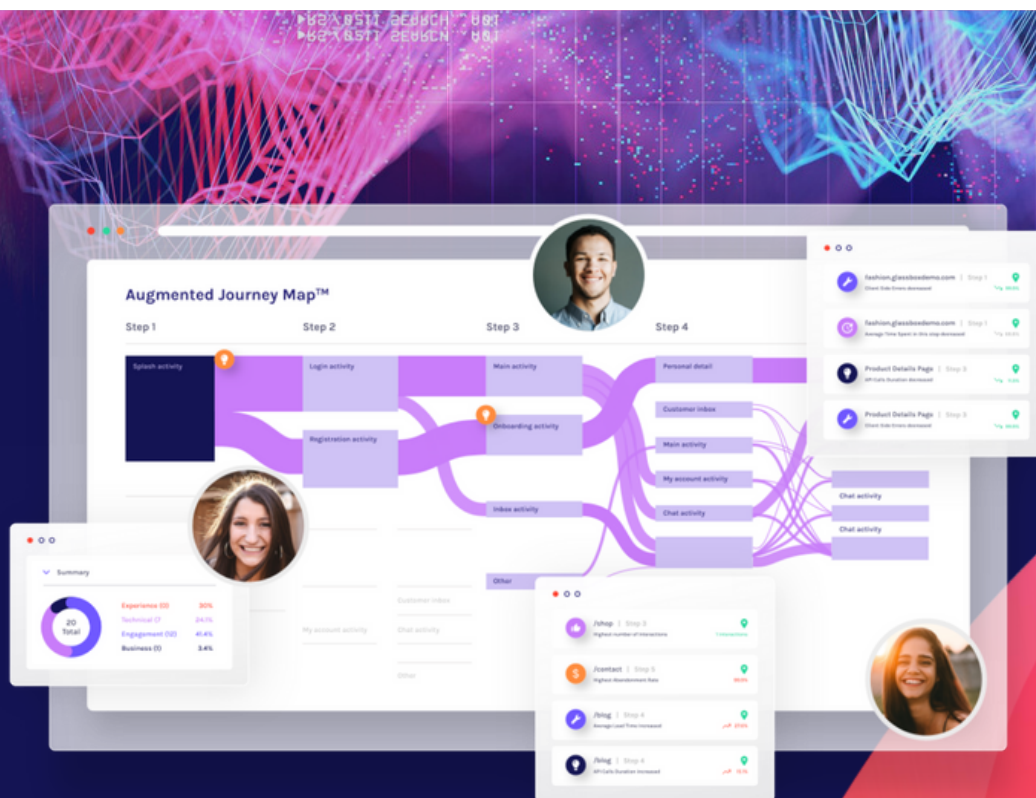
ASK THE EXPERT:

SHOULD YOU CONSOLIDATE ALL DIGITAL OPTIMIZATION TOOLS?

Remus Moraru
Senior Ecommerce Manager at Wizz Air

In terms of tooling, digital analytics is typically where we start. It's the core of it all, whether we're talking about Google Analytics or Adobe Analytics. But sometimes it's not the whole picture in terms of more complicated customer or journey flows, or, in terms of experimentation, using a different tool for running experiments. Do we need to find different tools to do different things? Or should we consolidate all things under one umbrella?

"I think in my first years, I was really converted into thinking that consolidation is the right answer. And part of me still thinks that consolidation is the right answer nevertheless, in an ideal world. In an ideal world it would really work. But with consolidation, the challenges are that the amount of complexity, the amount of data that you need to process from all the different angles, from all the different inputs – you will create yourself a bigger mess at the end of the day if you don't devote enough resources, enough capacity, enough time, than actually segmenting your measurements and looking at it from different tools.

In a lot of cases, consolidation will give you the overall picture or will try to have the overall picture for you. But in a lot of cases, what you need is ad hoc answers from different parts of the business or different parts of the flow, which in the end can be achievable quite fast from different toolings. So

right now, I think it's better to have a segmented view of maybe different tools, and all those tools can be specific to a specific area.

It's a different question if you can tie those tools together effectively and make meaningful data connections between these – lightweight, not deep integrations – and then make even further integrations or insights from how these different areas are interacting with each other. I think this is how I would proceed and how I would do any kind of data approach. Consolidation is a good dream, but it's a hard dream to achieve."

I agree. Often we strive for this ultimate, complex system that can do everything, and then we fail to do the little things because it's so complex to start to implement it. Sometimes it's better to try something and try to get some tangible results and then see how they really impact the things that you do based on them.

"Yes."

IS PROACTIVE IDENTIFICATION AND REMOVING FRICTION IN YOUR AIRLINE BOOKING FUNNEL THE NEXT STEP?

Greg Dowling
Global Director of Business Insights at

What will have the biggest future impact on understanding users and getting even better at conversion optimization? What will be the most impactful factor going forward?

"The cross-device thing, I think that is something that we really, really, really are focusing on at Glassbox. We want to be able to understand who the customer is, what they were trying to achieve, and whether or not they were successful regardless of which device or even physical location they come from. Being able to identify a user across devices as well as in person is going to be incredibly powerful over the next five years for digital customer experience analytics and digital customer intelligence. I think that's really, really important and a key thing.

I think realistically, the automation side of it – and once you have that cross-device view, the ability to go in and, in advance, predict when a struggle or an issue is going to happen and then to reroute that user around that struggle, that speed bump – we're getting to the point where we can do this quickly enough, and the content management systems are nimble enough to be able to say "Hey, I see that this person's going towards a known issue. Let's reroute them." Just like in the airline terminology. Let's reroute them around this trouble spot and get them back on track.

That's coming. That is absolutely coming. But we have to have that cross-device visibility, and we need to have that ability to predictively determine where and when a struggle is going to occur so that we can route the customer around that. That is coming. That's something we're working on here at Glassbox, without a doubt."

This should get everybody thinking and even more excited for future developments. It's a really intriguing concept because, like Greg said, everything we're doing with digital experience analytics and CRO is to try to understand where the friction points are and why they're happening.

So why not be proactive and try to do it on the fly?

If the next generation of digital optimization tools will be able to do that, it will be a huge opportunity for airline booking funnel optimization.

This first example shows what kind of tools a digital optimization manager used at a travel company called Avis Budget Group. Digital optimization teams ran 12 to 15 experiments per month on average (which is more than most of our surveyed airlines do). They used simple third-party vendor tools and platforms like Hotjar and Userzoom for digital experience analytics and unmoderated testing. The team used Adobe Target and Optimizely to run experiments, and Adobe Analytics for data analysis.

Experience

Digital Optimisation Manager
Avis Budget Group · Full-time
Nov 2018 – Present · 1 yr 8 mos
Bracknell

• Responsible for creating and delivering on an Optimisation Roadmap across all 16 EMEA digital websites based on commercial targets and overall strategy as agreed with the Senior Optimisation Manager. This involves launching on average 12-15 AB test or MVT campaigns each month.
• Jan – Dec 2019 the ABG optimisation programme drove over £15m in incremental revenue gains through extensive AB testing.
• Works closely with the digital design team to brief them on upcoming test hypothesis and gather designs required for build.
• Uses behavioral analytics tools such as Hotjar and Userzoom to find current conversion blockers on site, and gather feedback on early AB test design work from real customers to help prioritise the roadmap of testing.
• Works closely with the digital analytics team to build complex reporting for AB tests in Adobe Analytics and to identifying new optimisation initiatives across all websites.
• Champions a culture of experimentation throughout the EMEA business unit, working with stakeholders from numerous departments including Trading, Product Management and local marketing teams to get buy in for new test ideas and gather feedback from customers arriving at rental stations both pre and post-rental.
• Feeds the BAU pipeline team with winning experiments to get deployed to the site for all customers.
• Intermediate knowledge of HTML, CSS and jQuery allows me to use AB testing tools such as Adobe Target and Optimizely to build around 25% of our testing output.

see less

This second example is from Virgin Australia and shows how they consolidate most of the digital optimization tools under one vendor. Virgin Australia used different products from the Adobe Experience Cloud suite: Analytics, Campaign Manager, and Target.

Adobe AEM Technical Lead

About us

We know what sets Virgin Australia apart is our people and the drive that we all have to make a real difference for our guests. Our culture encourages innovation whilst ensuring that our guests remain the focus of our business. We deliver a highly professional and polished service, whilst ensuring that we are safe in everything that we do. We want dedicated people who are passionate about customer service and ready for the challenge of working in a challenging environment.

The reality is that being a team member of the Virgin Australia group of airlines involves hard work but is very rewarding. Our people are at the cornerstone of the business and their award winning service to every guest every day is putting the magic back into flying.

The Role

The objective of the Adobe Experience Manager (AEM) Technical lead will be responsible for the management of the VA.com and VFF.com platform (back and front end). This is a newly created role for Virgin Australia as we are undertaking a new project rollout replacing our current CMS platform with AEM and we are looking for a strong and knowledgeable AEM Technical Lead who can work alongside the project and guide the teams on technical decisions, frameworks and implementation, whilst also looking forward to the future management, development and operations of the platform and websites.

This role is highly critical to the success of our digital strategy and only strong AEM technical specialists with hands on experience of AEM 6.3 or later will be considered for the role.

What you need to be successful

- 6+ years' experience with AEM implementations
- Adobe Certified Expert (ACE) – Adobe Experience Manager Architect
- Experience end to end implementations of AEM 6.3 or later.
- Hands on experience Adobe Cloud integrations to AEM solutions/implementation.
- Good understanding of AEM infrastructure including OSGi, JCR, sling, Bundles, OSGI, Sling model and Dispatcher configuration
- Experience working across multiple products in Adobe Experience Cloud –primarily Adobe Experience Manager, Adobe Analytics, Campaign and Adobe Target
- Good understanding and appreciation for API, Microservices technologies & Cloud implementations.
- Proven development experience of front end and back end (using AEM and React) integration, and SPA concept
- Experience in working in a DevOps culture and practice including continuous integration, testing and deployment
- Good understanding/worked in Multitenancy AEM Environment
- Strong analytic, teamwork and collaboration skills to lead discussions and help the team reach consensus
- Ability to work with designers to develop dynamic user experiences.

VII.

INTERNET BOOKING ENGINE (IBE)

Q: HOW FLEXIBLE IS YOUR INTERNET BOOKING ENGINE (IBE) FOR A/B TESTING AND OTHER EXPERIMENTS?

- **Level 1:** Our IBE doesn't support A/B testing and experiments
- **Level 2:** Simple A/B testing and experiments are possible but with workarounds and take a long time & effort to implement
- **Level 3:** We can do basic and semi-complex experiments and A/B tests on an ongoing basis
- **Level 4:** We can do split-path A/B testing, have & test several versions of booking flow at the same time
- **Level 5:** We completely own and manage booking flow and have no limitations with A/B testing and experiments

By Size

Small   Medium   Large

By Type

LCC   FSC
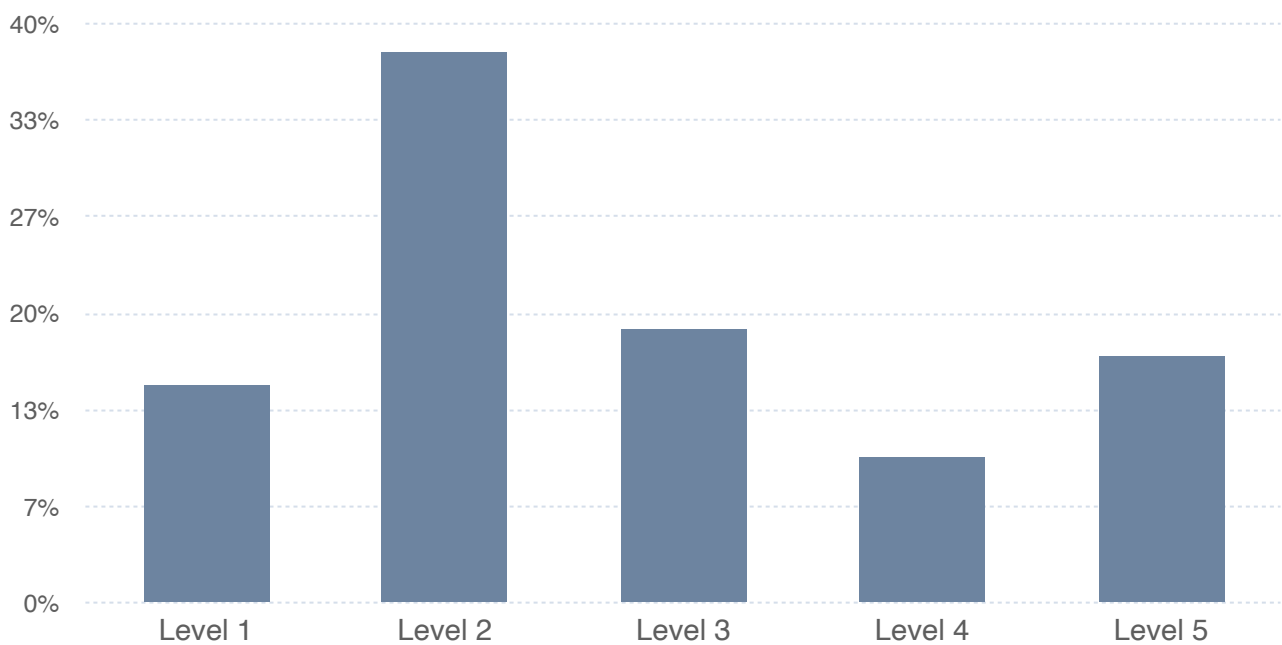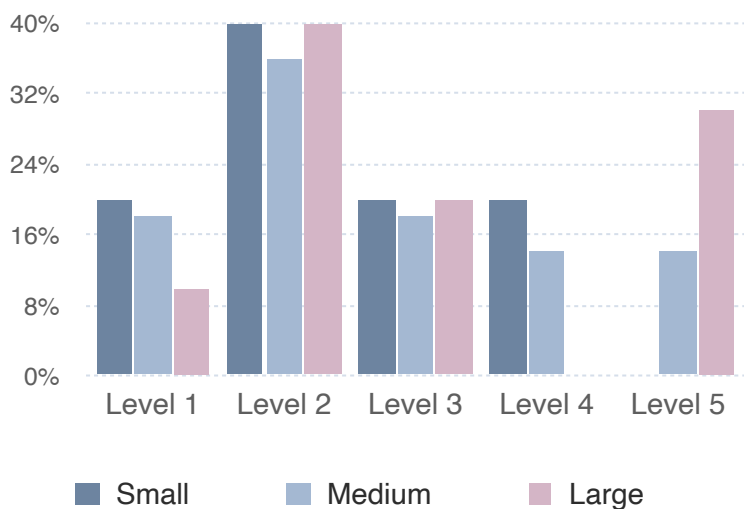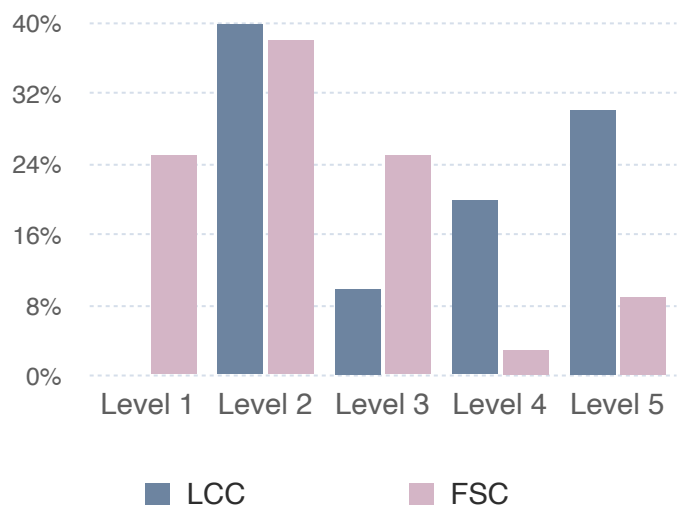
KEY STAT: LOW-COST AIRLINES CONTINUE TO INCREASE THE GAP WHEN IT COMES TO BOOKING ENGINE FLEXIBILITY

53% of the airlines in our survey claimed they have internet booking engine (IBE) solutions that are not flexible for A/B testing (Level 1 or Level 2). 38% from this group said their IBE solutions allow them to run A/B tests, but it takes a lot of time and effort to do it (Level 2), and 15% said their IBE solution doesn't support A/B testing at all (Level 1). On the other end of the spectrum, 27% of airline optimization professionals are satisfied with the testing capabilities of their IBE platforms (Level 4 or Level 5).

Through the years, internet booking engine flexibility has been the area in our surveys where there is the most glaring gap between low-cost airlines (LCC) and traditional, full-scheduled carriers (FSC). This gap only got bigger in our 2022 survey. Because of legacy technology setup, a lot of FSC airlines use pre-built IBE solutions from major industry vendors. LCC airlines mostly build their own booking solutions based on APIs, so they have much more flexibility with customization and running tests. None of the 20 surveyed LCC airlines claimed to have a booking engine that doesn't support A/B testing and experimentation (Level 1); this share is 25% for FSC airlines. One important caveat here: Even if

your booking engine doesn't support A/B testing, it doesn't mean you can't do any experiments at all. See our **"Ask the Expert" section for experimentation ideas, even if you have booking engine limitations.**

50% of LCC airlines stated that they could run complex experiments in their internet booking engine (Level 4 or Level 5), while only 12% of FSC airlines claimed the same. 30% of LCC carriers have complete control of their booking engine for running experiments and tests (Level 5), compared to only 9% of FSC airlines.

Because of the more complex distribution and IT landscape (and legacy solutions), FSC airlines' internet booking engines are much less flexible than the ones LCC airlines are using. The vast majority (78%) of FSC airlines use IBE product solutions from big vendors like Amadeus and Sabre. These product solutions were often built as an extension of the legacy PSS platforms, and as such are not the best fit for modern digital optimization and A/B testing. Many airlines that use IBE product solutions claim that complex tests are time- and cost-consuming due to IBE constraints.

Do you have a custom built IBE or do you use an IBE product-solution?
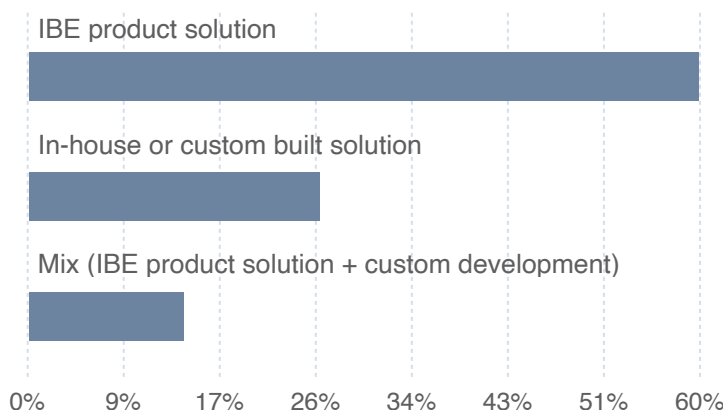
Most popular IBE product solutions
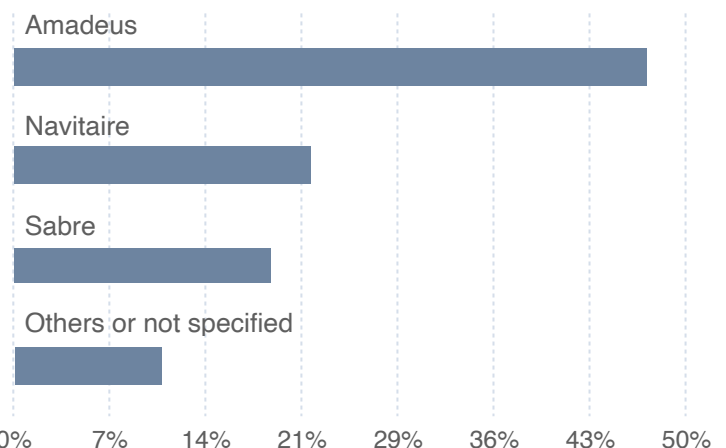
The share of LCC airlines that use an IBE product solution is much lower (35%). 55% of low-cost airlines claimed to have an in-house or custom-built internet booking engine. Navitaire is by far the most popular IBE platform among LCC airlines; however, most LCC airlines use it only as a base and have custom development on top.

In the prior section (Section VI. – Tools), you saw why testing tools are the first and a very important part of your digital optimization tech setup. Integrating these tools with your booking engine, or even building a custom booking engine with A/B testing functionalities, is the other part.

To take your digital optimization and CRO to a higher level, you need to run more tests and be able to create more complex optimization scenarios. To do that, testing functionalities need to be embedded into your core booking platform (IBE). **All Leaders from our 2022 survey claimed to completely own and manage the booking flow and have no limitations when it comes to A/B testing and running experiments (Level 5).**

If you can't run more complex scenarios (for example, split-path tests, or different versions of booking flows), you're basically just optimizing landing pages, or individual pages within the same booking funnel. This is still better than running no experiments at all, but your optimization and the results are really limited.

# KEY TRENDS: WHAT CHANGED COMPARED TO 2020

2022 ■ **2020** ■
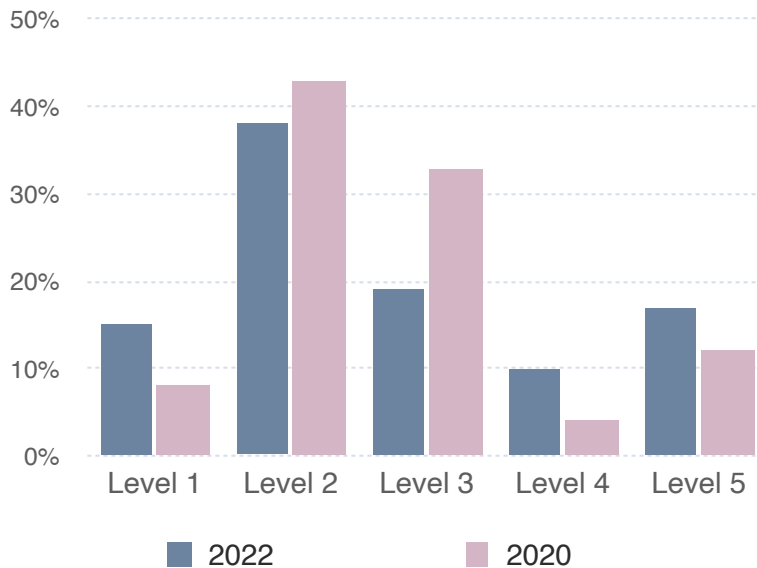
If we compare the 2022 results to those from our previous survey, we can see that in terms of the big picture, the results did not change much. We saw regression in most other areas, but booking engines are not easy to change, and new implementations take a long time; so, because of the pandemic, we didn't see major changes. A similar share of airlines claimed to have booking engines that are not flexible for testing (Level 1 or Level 2): 54% in this year's survey, compared to 51% in 2020.

However, there is a positive trend regarding airlines who are more mature when it comes to digital product development and optimization. The share of airlines that claimed to have the capability to run more complex booking funnel experiments (Level 4 or Level 5) increased to 27% from 16% in 2020. As mentioned in the prior section, low-cost airlines represent the vast majority of airlines with flexible booking engine platforms. The main goal of this research is to increase awareness about the importance of experimentation. Having flexible digital platforms

that allow you to optimize and test plays a crucial part in the airline CRO process. During our research, we were glad to see that A/B testing capabilities are now at least taken into consideration when airlines plan their new IBE setup. While many airline digital professionals claimed that inflexible digital platforms limit their CRO initiatives, there is a desire to improve the current state. There were a few airlines in our survey who said they are in the process of migrating to a new digital platform (and new testing tools), which will enable them to be more flexible when it comes to testing and experimentation.

When it comes to the **digital touchpoints where airlines do CRO and digital optimization**, the main airline websites are still the predominant channel. Almost all airlines (96%) do at least some kind of CRO activities on their website. However, many airlines still lack the resources or knowledge to do digital optimization activities on their mobile apps. Only 61% of airline digital professionals in our survey answered that they do digital optimization activities on their airline app. The positive trend here is that this share increased by 12% compared to our 2020 survey, when less than half of the surveyed airlines (49%) said they do CRO activities on their apps.

Which of the following platforms do you optimize (user research, optimization, A/B tests)?
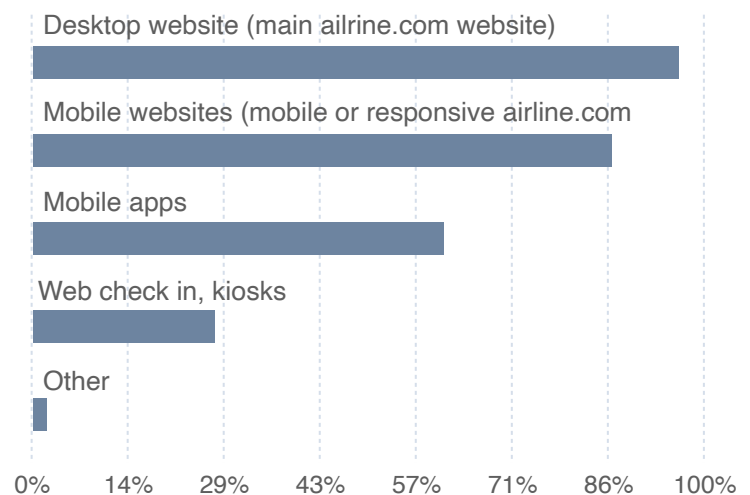
HOW TO BE FLEXIBLE WITH YOUR EXPERIMENTATION, EVEN IF YOU HAVE BOOKING ENGINE LIMITATIONS

Ben Labay
Experimentation Expert, Managing Director / CRO and Experimentation at Speero by CXL

What we tell people is you shouldn't be completely discouraged when it comes to booking engine and A/B testing capabilities. Even if you have some limitations, if you're a little bit creative, you can still test parts of the booking flow. Often, I hear airlines say that they have limitations and because of this, they don't do any experimentation.

"The point is not to test. The point is to make the decisions. We're doing a lot of other types of interventions. Design testing with Maze.co is a really cool tool. It's like user testing but with design prototypes."

Prototype testing, meaning you can run tests on your prototypes even before you design and develop your digital solutions?

"Yeah, Maze is a cool tool to make that really easy and quick and actionable. User testing itself is a qualitative form of intervention. Message (copywriting) testing to an extent. We've got our tool Wynter.com that we do a lot of that with as well."

This is what we say when we talk with people in our airline digital gatherings. I think messaging (meaning all copy on your airline website) is the most underrated part, because everybody is focusing on the buttons and the UX designs. But especially in airlines, there are so many restrictions and so little emphasis on the value proposition. This is a huge gap. It's not that difficult to set up to test different copy, and that can create huge gains.

"Yeah, and there's so much of optimization that can be done with copy that doesn't need to be tested. Even on our own website, if you go to Speero.com, I hate a ton of our copy, and it's never my priority to go and make it seem like a robot didn't create it. I just want to be like, "Who wrote this? Why did we stick with that?" Yeah, there's so much optimization and stuff that can happen around copy.

There's brilliant copywriters out there. The calories that you spend on copywriting – it should be Step 1, but for some reason it's relegated. The hammer in our hand is testing, A/B testing, in our field. So we need to think a little bit more broadly of the forest for the trees kind of thing."

All five Leaders in our survey claimed to completely own and manage their booking flow and to have no limitations when it comes to A/B testing and experiments. Three of them claimed to use their own experimentation platform integrated with their booking engine.

Here you can see an example of the "Product Owner – Experimentation Platform" role at AirAsia. To scale up their testing programs, airlines need to embed testing into their core booking platforms and digital product development.

Experience

AirAsia
3 yrs 1 mo

Product Owner-Experimentation Platform
Jan 2020 – Present · 2 mos

Conversion Manager - Group (E-commerce)
Full-time
Feb 2017 – Jan 2020 · 3 yrs
RedQ, KLIA2

-Built and enhanced in-house experimentation platform that could be used to split traffics, run multiple A/B tests and pushing real time user data for analysis to Google Analytics and Big Query.
-Increase website conversion through personalization and improving website performance via A/B or multivariate tests
-Work on A/B test prioritization model with impact scoring system to assist product managers to prioritize test and implement test road map.
-Conduct pre and post feature deployment analysis to suggest further page optimization.
-Coordinated with product managers to plan and execute the tests.
-Coordinated with data scientist to build automated test performance dashboard for faster analysis and better decision making across multiple stake holders.
-Coordinated with developers to build the A/B test and conduct testing before deploying the test.
-Conduct on-page revenue impact analysis to identify features with highest potential revenue growth for Product Managers to prioritize new feature developments
-Conduct monthly funnel conversion analysis and primary metrics performance to ensure improved conversion rate across the website.
-Constantly monitor and enhance the accuracy of the test results by optimizing the test and analytics methods.
-Coordinated with software developers to create custom features and trackers to achieve stake holders and partners goals.
- Experienced with experimentation tools like Optimizely and Google Optimize
see less

# ORGANIZATIONAL SUPPORT

Q: WHO IS A DIGITAL OPTIMIZATION AND EXPERIMENTATION SPONSOR IN YOUR ORGANIZATION?
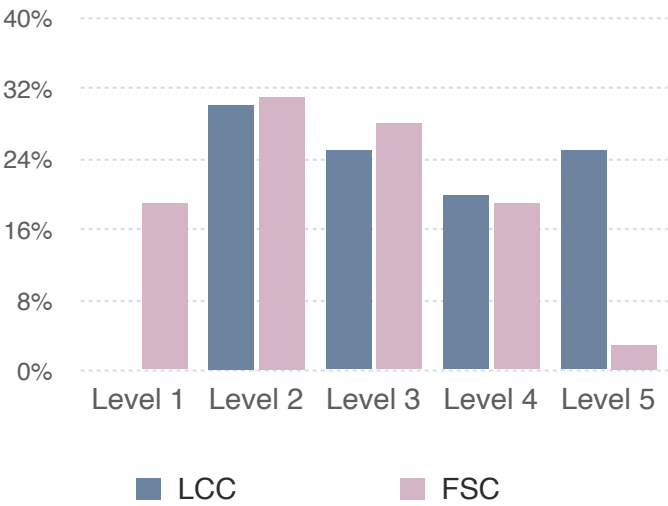
- **Level 1:** None – digital optimization & experimentation is recognized on an individual level
- **Level 2:** Head of Ecommerce – digital optimization & experimentation is recognized on a departmental level
- **Level 3:** Director level – digital optimization & experimentation is recognized by director or higher management
- **Level 4:** VP level – digital optimization & experimentation is recognized and supported by VP level executive (top management support)
- **Level 5:** Entire organization – digital optimization & experimentation is recognized as a crucial activity and has company-wide (C-level) support
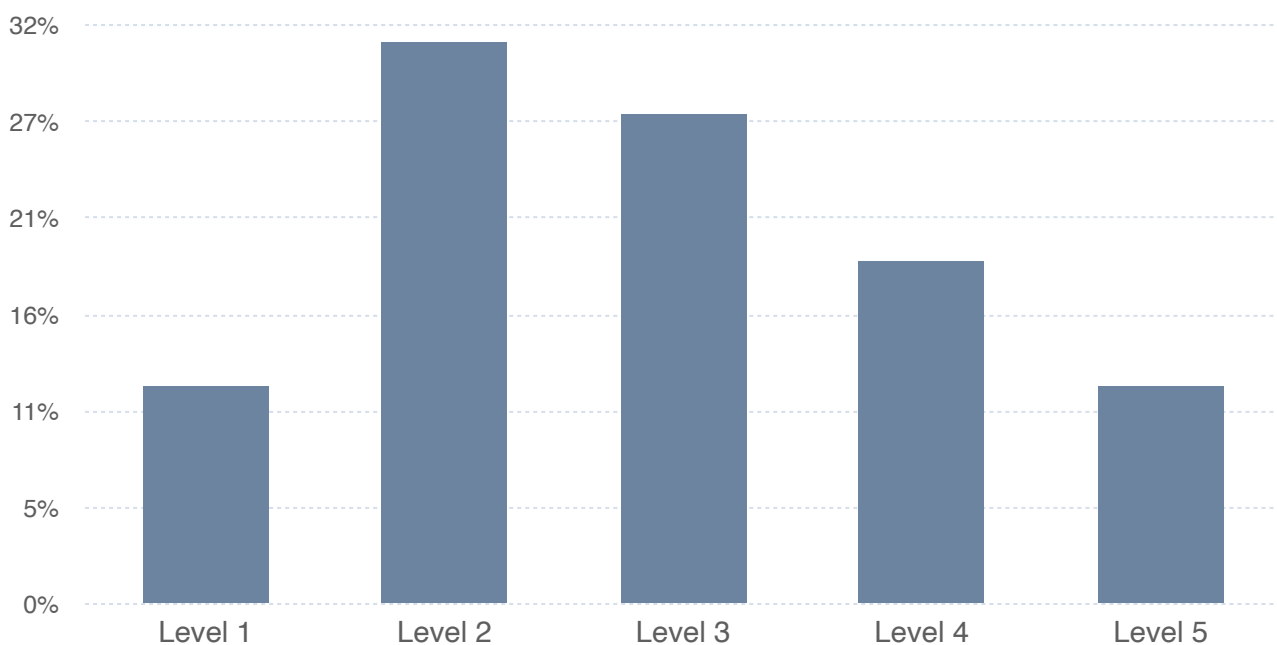
By Size
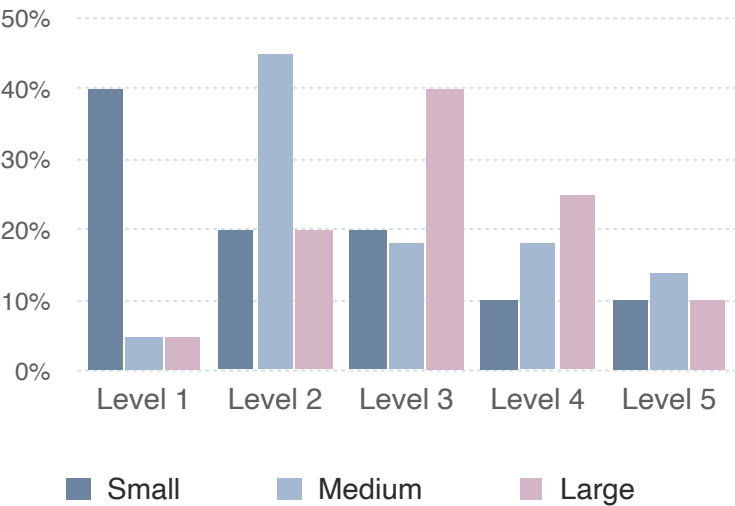
By Type

KEY STAT: IF AIRLINES WANT TO ATTRACT DIGITAL TALENT AND BE DATA-DRIVEN, THEY NEED COMPANY-WIDE SUPPORT AND BUDGET FOR EXPERIMENTATION

Only 31% of the surveyed airlines claimed digital optimization and experimentation have company-wide exposure and top management support (Level 4 or 5). This share is much higher (45%) for LCC airlines compared to FSC airlines, where the share is only 22%. Low-cost airlines are more digitally mature companies, where direct digital channels are the predominant distribution channel. They also have a flatter organization, so experimentation and digital optimization have more exposure at the top management level.

But even the LCC airlines have a lot of room for improvement. In our surveys over the years, we still haven't seen a breakthrough when it comes to budgets for experimentation. Only 10% of airlines claimed to have dedicated CRO and experimentation budgets. What's more, **50%** of airlines don't have any budget for CRO and experimentation. As in other areas, the pandemic made things worse, as there are now fewer airlines with budgets for experimentation compared to our 2020 survey.
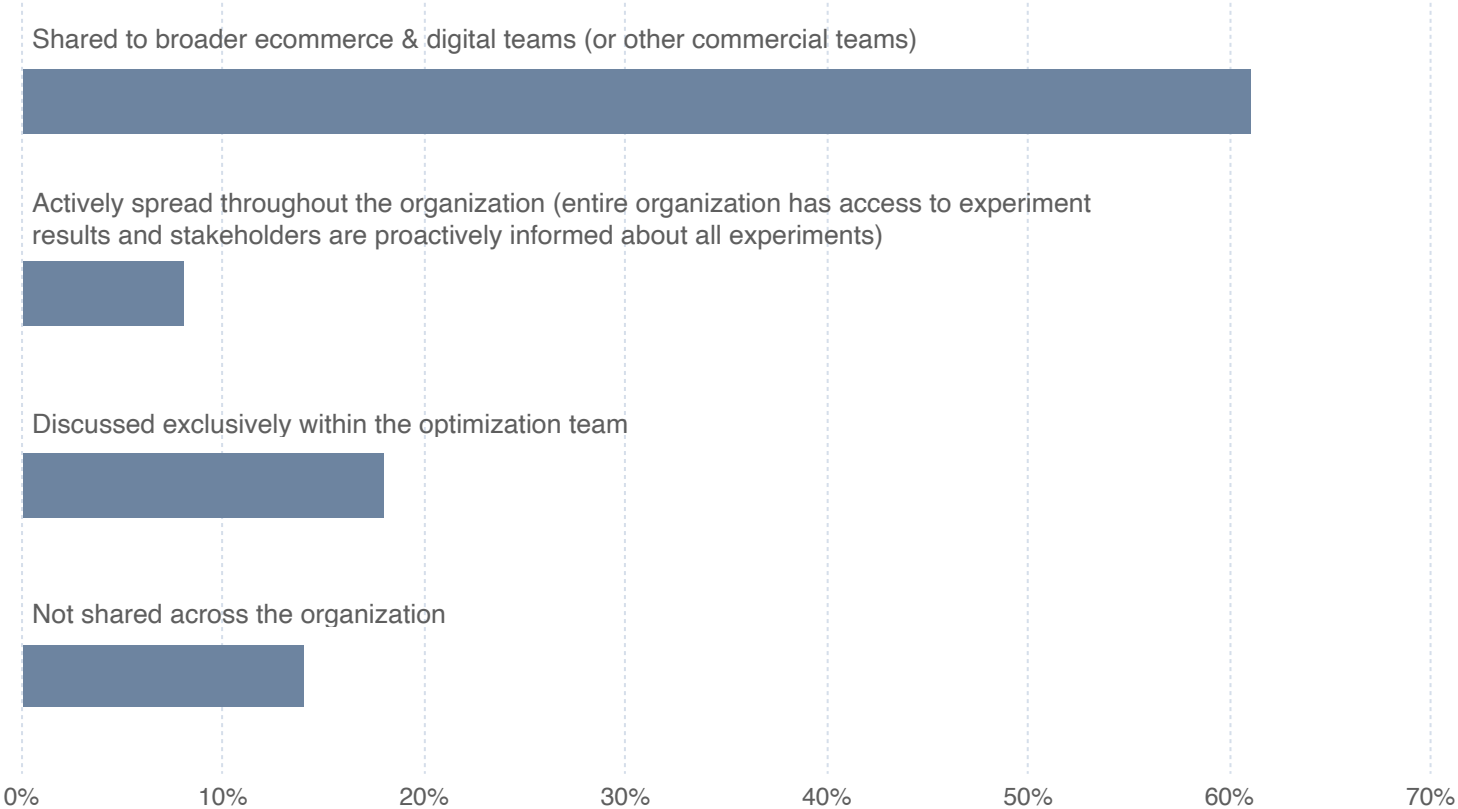
Most of the surveyed airlines (61%) share experiment results and learning within ecommerce and digital teams; only 8% said they share it across the whole organization.

Experimentation should not be part of digital optimization only. It shouldn't be seen as merely an ecommerce process, or even just a marketing tactic (a.k.a. growth hack). A data-driven, scientific approach should be adopted company-wide. To achieve long-term growth, airlines need to embrace optimization and experimentation as a strategic initiative. This is why, for the fourth year in a row, we're repeating ourselves in this
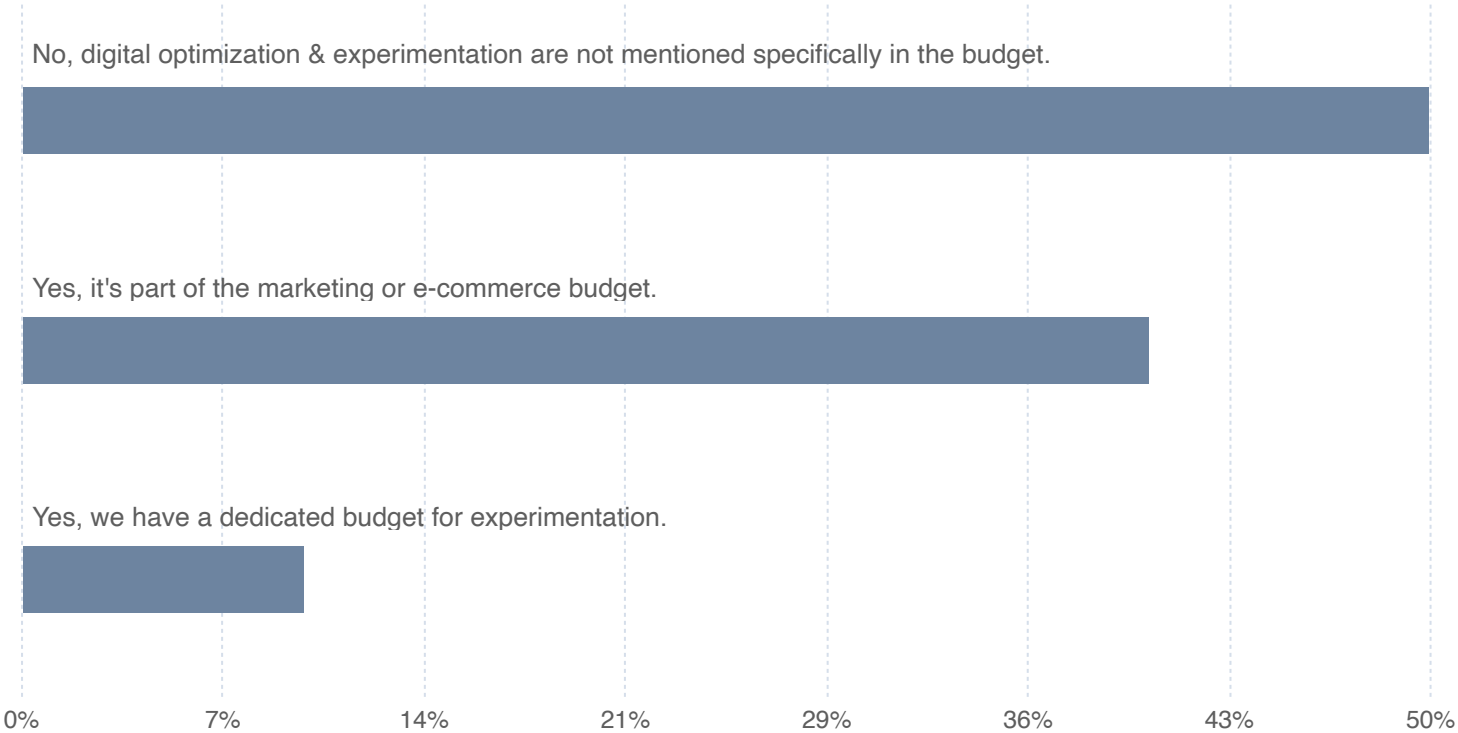
paragraph and sharing the same quote from Bart Schutz, an optimization expert, as it really emphasizes the importance of company-wide recognition:

"Embracing optimization caused hockey stick growth among lots of digitally mature companies. Yet lots of other companies still struggle to follow their growth paths. A major cause is the embedding of 'optimization' in an online marketing team, instead of embedding it as a 'company-wide, data-driven & evidence everything' culture. Exponential growth through optimization is not about an online marketing instrument, it's about DNA. Top down; embracing optimization should be a board level decision. Optimization is often a way more effective business strategy than innovation. Bottom up; the marketing and e-commerce teams that are currently 'just optimizing web & app pages' should start focusing on growing their business as a whole. Start applying optimization omni-channel and across all customer journeys and touchpoints."

How are experiment results and learnings implemented and shared across the organization?
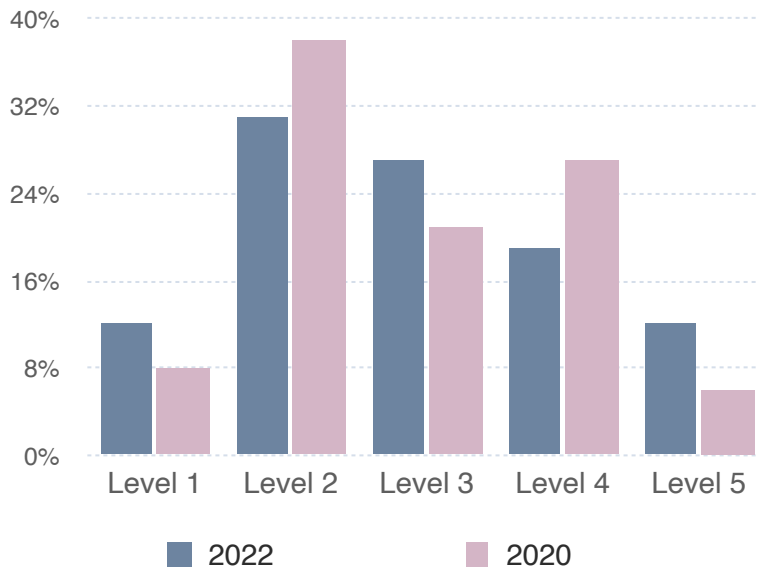
Shared to broader ecommerce & digital teams (or other commercial teams)

Actively spread throughout the organization (entire organization has access to experiment results and stakeholders are proactively informed about all experiments)

Discussed exclusively within the optimization team

Not shared across the organization

0% 10% 20% 30% 40% 50% 60% 70%

Do digital optimization & experimentation have their own budget?

No, digital optimization & experimentation are not mentioned specifically in the budget.

Yes, it's part of the marketing or e-commerce budget.

Yes, we have a dedicated budget for experimentation.

0% 7% 14% 21% 29% 36% 43% 50%

KEY TRENDS: WHAT CHANGED COMPARED TO 2020

As you could see throughout our survey, the maturity of airline digital optimization decreased across all areas compared to 2020. This is reflected in organizational support for digital optimization and CRO as well. Fewer airlines recognize and support digital optimization on a top management level (Level 4 or 5) than they did in our 2020 survey. Most airlines (58%) still recognize CRO on a departmental or director level (Level 2 or 3); this share remained the same as in 2020. However, the share of airlines where CRO is not recognized at all (Level 1) increased from 8% in 2020 to 12% in this year's survey.

In our introduction, you saw how some airlines have "used" the pandemic to focus on digital and building their direct ecommerce channels. At Diggintravel, we post new airline digital opportunities on our dedicated Airline Digital Job Board, and we saw a surge of new digital roles at the beginning of 2022.

Many airlines, like SAS (Scandinavian Airlines), are undertaking large digital transformation projects and building internal digital teams. The challenge for airlines is that they are competing for digital talent with modern digital native companies. A lot of airlines are "legacy" companies with a large and complex organization. Building a new digital culture and new digital DNA is the key if airlines want to attract the best digital talent. Empowering people and fostering experimentation and a data-driven approach to building digital products should be at the forefront of building an attractive airline digital workplace.

You can check out our **"Ask the Expert"** section to learn how legacy companies are **leveraging experimentation to attract digital talent.**

In our **"Examples" section**, you'll see an example of an airline that put t**he power of proof and experimentation forward as one of their main company values.**

Eleonor Kallin · 1st
Digital Product Owner på SAS
1h · Edited · 🌐

Are you ready to be a part of a historical transformation? We are making the largest move within Digital & IT in our history. We will employ 100 new people working with data engineering, data science, UX-design, front- and backend development and more. First out - Tech leads!

SAS

TECH LEAD
Job by SAS - Scandinavian Airlines
Solna, Stockholm County, Sweden

View job

23 connections work here

BUILDING A CULTURE OF EXPERIMENTATION TO ATTRACT THE BEST DIGITAL TALENT

Ben Labay
Experimentation Expert, Managing Director of CRO and Experimentation at Speero by CXL

Here is a quote from Ben on how some legacy, non-tech-focused companies like airlines are leveraging experimentation to attract digital talent:

"You have this other strategic narrative, especially for legacy companies, these big, older, not-tech-focused companies – the strategic narrative for testing isn't "We're going to make you more money." It's "We are an innovative place to work." These bigger companies, and I'm sure a lot of big airlines that you work with – there's companies like Walmart in the U.S. here. They just don't feel innovative. Why, as a young, amazing tech talent, do I want to work there? So that's a different strategic narrative. If I create a culture of experimentation, if I test for a while, I'll create that culture, and then I can attract the talent to come work in my culture. That's a whole different reason to test than testing to win."

And another insight from Ben on how they're helping companies build Centers of Excellence (see Section I. for organizational models) and nurture a culture of experimentation to attract digital talent:

"What we're doing is building Centers of Excellence. But a Center of Excellence isn't like one node right in between that centralized and decentralized spectrum. It depends on the organization where it lies. What do you want the Center of Excellence to maintain? What do you want them to govern? What do you want them to educate on, etc.? What do you want your product teams to own, especially around the strategy? You want them to own strategy; you want the Center of Excellence to own more of the process and the program guidelines and the education leveling rituals. It's a lot of work.

We've got some tools that are helping us do these audits. We separate, for example, the culture and strategy of an organization from the people skills from the process and governance from the tools and data. These are our four top level pillars, and underneath that we've got sub-pillars, and those are just activities, tools, artifacts, and rituals under each of them that you could be using to push forward on the program.

Where we see success generally is when we start looping in leadership. For example, we're working with a giant ecommerce out of Europe right now, and they have more than 40 product teams. They've got probably 100+. They are in that persona of this big legacy company needing to hire better talent. Their justification is "Let's experiment and create that program." We're working with their HR department directly to create these roles and to create the language that even allows for the product owners not to be 150% time booked. And for them to even test and have that part of the OKR system.

So leadership is key. As you get bigger, leadership is the lynchpin."

Eurowings Digital is a company that is promoting the "power of proof" as one of their core values. Eurowings Digital wants to attract the best digital talent by empowering their digital people and fostering a work environment where experimentation and testing are key parts of the digital development and optimization process.

Power Of Proof

Be empowered

"When I joined Eurowings Digital, I learned about the value "Be empowered" and the motto "We try, we fail, we improve". Quickly I mentioned the concept of "FuckUp Night". A week later I presented the concept in our weekly Monday Morning Exchange and organized three amazing events so far." Christian – Java Developer

Power of proof

Power BI, A/B testing, charts, OKRs, pulse check: we love tools which give relevant information. From our Sales team to our Development team, we always commit to decisions that are based on data.

REFERENCES & SOURCES

REFERENCED DIGGINTRAVEL RESEARCH AND ARTICLES:

Diggintravel 2020 Airline Digital Optimization survey
https://diggintravel.com/airline-ecommerce-2020-yearbook/
Airline Digital Analytics Evolution at Air New Zealand
https://diggintravel.com/airline-digital-analytics-evolution-air-new-zealand/
Airline Digital Experience Analytics: Understand Your Customers' Behavior
https://diggintravel.com/airline-digital-experience-analytics/
Airline Experimentation Talks: How to Make Better and Faster Decisions
https://diggintravel.com/airline-experimentation-talks/
Airline Data Talks: How to Implement Advanced Airline Digital Analytics
https://diggintravel.com/how-to-implement-advanced-airline-digital-analytics/
Airline Digital Talks: Remus Moraru, Wizz Air
https://diggintravel.com/airline-digital-talks-wizz-air/
How Experimentation Helps You Build Better Travel Digital Products [Booking.com Case]
https://diggintravel.com/travel-digital-products-booking-com-case/
How to Understand Airline User Behavior [American Airlines Case]
https://diggintravel.com/how-to-understand-airline-user-behavior/
Finnair Digital Transformation [How Airlines Adapt to COVID-19]
https://diggintravel.com/finnair-digital-transformation/

REFERENCED BOOKS, DOCUMENTS AND RESOURCES

Experimentation Works: The Surprising Power of Business Experiments; book by Stefan Thomke
The State of Digital Experience and Conversion in 2020 ; report by Consultancy
From 1 CRO team to the whole company embracing CRO ; presentation by Ton Weaseling

REFERENCED ONLINE RESOURCES

https://hbr.org/2020/03/building-a-culture-of-experimentation
https://speero.com/briefly-experimental
https://www.linkedin.com/posts/edgar-spongolts-0037267_one-of-the-hardest-questions-in-experimentation-activity-6887052831413600256-WLss/
https://mopinion.com/cro-best-practices-from-7-conversion-experts/