DEFINE PRODUCT EXCELLENCE WITH SERVICE DESIGN

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How to deliver high-quality experiences for people where they are and when they need them



Director of Product Design



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ESTABLISH THE FOUNDATION FOR GREAT PRODUCTS

Lyft now provides public transit directions, bike share, and scooter rentals. They want to be known as the app people use to get from point A to B, whether or not you need a ride. Similarly, banks are acquiring and partnering with budgeting and credit management services to become thought of as the financial services partner for their customers.

Organizations are shifting from building products to providing solutions to problems. The enterprises winning in the market are creating customer-centric solutions. The secret to their success lies in the discipline of service design. Service design embraces the fluid relationship between customers and the goods and services they consume by thinking about the entire experience interacting with and around a product.

This white paper outlines how integrating service design into product development produces measurable results by bringing design thinking to improve the bottom line. Rather than chasing a vague series of metrics, focus on the full benefits a product can provide and measure each respectively. The discipline of service design seeks to understand the entire system around a product-including the people, products, related systems, interactions, workflows, back-end, and front-end processes connected to the digital product. The ways each of these aspects are connected, developed, and maintained makes a material impact on the customer experience.

Building a system-level perspective allows for greater insight into the unique risks associated with building or integrating a product into the existing environment (e.g., network considerations, data quality, and overall performance). Uncover the upstream dependencies and downstream impact the product has on the business and the customer. Through this, it is possible to turn risks that competing products might not account for into a competitive advantage.



BREAKDOWN THE COMPLETE SYSTEM

People-their thoughts, needs, interactions, perceptions-are unique. Their perspectives directly influence how they think about, interact with, and gain value from interacting with a service. However, fixating on the customer alone is not the same as being customer-centered.

Similarly, physical surroundings are distinct and influence the experience. Watching a movie on an airplane is never the same as being in a high-end cinema. While time on a flight goes by faster, experiencing a film in the theater is a more immersive experience. Both locations (theater and airplane) have constraints and pain points to consider. The drink cart is a welcome sight at 30,000 feet, but it would be a disaster in a cinema.

As the complexity and context of the service expands, so do the contextual challenges and risks. Rather than try to understand everything in one view, break down the interactions into a series of moments. Look at each handoff point and ownership point. Who drives action? Who is waiting for next steps? With an inventory of the interdependencies across efforts and teams, it's possible to get ahead of items that would otherwise become product debt.

Teams and professionals need to broaden their perspective and become more inclusive and intentional about their product decisions. Consider the experience a person using the product needs to have to be successful. Part of this success includes understanding the systems that support a product and its impact on the larger context the product exists within.

Service design provides the platform to determine design thinking value. The practice breaks down problems into manageable segments. It primes the dev team for productive conversations around adoption, change management, stability considerations, and documenting the overall maturity of the current and future state system.

A CLOSER LOOK AT FINANCIAL SERVICES

Industry insiders discuss the process of a customer acquiring a new financial product in terms of "digital onboarding" and an "omnichannel" or "channel-less" strategy. These terms are inclusive of a long list of factors, such as:

- How does the customer first hear about the product?
 - How does a customer express interest?
 - What happens when they take action?
- Where do they have to be to complete the process (e.g., in the bank, in front of a computer)?

What actions are required for completing the process operationally?

Can users stop/start the process?

Is a wet signature required?

How much information and what type of data does the customer need to provide?

What are all the possible outcomes?

What is the customer experience like when using the product?

The above being the shortlist, it makes sense to use industry terms (e.g., customer on-boarding). Realistically, a customer isn't going to wake up, and while enjoying their morning coffee think about onboarding to a financial product omnichannel style. However, a customer would think about opening a bank account and the steps they need to take to complete the process.

Empathy for the customer and their situation—as well as their needs when using a product—is more important than any specific business requirement. Having a customer persona derived from research and a journey map are a reliable baseline for meaningful interactions. Experiences are not truly user-centered without a holistic approach. Take time to understand the customer's environmental considerations and the entire experience. Otherwise, results may fall flat. 03

DELIVER A DATA-INFORMED EXPERIENCE

Modern competitive advantage isn't datadriven alone. It's data-informed, inclusive of experience and intuition. Orienting an entire product around numerical outputs limits the team's ability to provide actionable insight on the customer's perspective. Service blueprinting is a framework used to define important aspects of the experience, what happens around an experience, what is worth measuring, and how to measure results. View the product through the lens of the experience. Then, focus and priority can resolve painful moments and expand on the quality of what works well.

There are four critical individual views to consider when understanding the impact of a new product, and any change management required:

- 1 The current state
- 2 The future state of the service and experience
- 3 The external factors that influence the service
- The upstream dependencies and downstream impact

UNDERSTANDING THE CURRENT STATE

A blind spot for many teams is assuming an opportunity is greenfield and that nothing has been done before. Even greenfield efforts replace something, even if that something is largely empty. Understanding the current state is equally important for any replacement effort or consolidation.

Take time to understand what exists to date.

If there is a product in place: Start by mapping out current state workflows and gathering current state metrics.

If greenfield: Document the pains and opportunities that led to pursuing a new product, creating a baseline to measure against in the future.

If replacing a larger system: Break each service down individually.

Avoid looking critically at design decisions and code quality because it was old, or the team at hand didn't write it. Chances are the people who originally built the product did the best they could with the information they had at the time. Instead, take a step back to understand why the decisions were made that informed the original build. This way, the team is primed to build on top of past lessons learned, rather than repeating the mistakes made.

DEFINING A BETTER FUTURE STATE

After unpacking the current state, define specific moments and aspects that improve the overall process. Is the new solution a one-to-one replacement? Or is there an opportunity to rework the surrounding business processes to elevate the success of the targeted solution further?

Any adjustments or new features have a broader impact that informs a number of actions essential for a successful implementation.

- How is the upstream data provided to the application?
 - What would shifting downstream teams' actions do?
 - What would happen as a result of reworking the way a team is structured?
 - Would anything change if individuals or teams physically sit somewhere else (e.g., closer or further away from colleagues) relative to each other in a workspace?

While systems-level changes may not be within scope, evaluate if modifications are necessary or beneficial. It's critical to understand the impact of any changes to the workflow–even if the changes required are out of the team's control. If not, time and time again, issues frequently surface as impediments to the success and speed to market of the development effort.

INVESTIGATING THE EXTERNAL FACTORS

Apply the compellation of the current and targeted future state findings to the person using the application. Get into the headspace and location of the person using the solution. Having contextual inquiry of a representative sample interacting with the application provides the necessary context to drive a strong adoption of the product.

Some factors informing the larger context include:

PURPOSE	CONTEXT	FACTORS
How often is the product used?	Does the product presume domain knowledge?	Where are people physically located when using the
Does the product presume the	-	application?
user remembers how to use it?	Is this product a key part of a	
	process within a domain?	Are they in a comfortable
Are there other products		and familiar environment?
that are used concurrently,	What information is being	_
immediately before, or after?	presented at the same time	Are they stationary or
	someone uses the product?	on the go?
What supplemental material		
is required to complete the	What other events, products,	What other equipment
workflow?	or information is competing for user information?	is in use?
What activity or event leads		Are there immediate
someone to use the product?	What customers or standards	dependencies reliant on
I	surround the activity?	the successful completion
What does someone do after		of a task?
they are done?		

CONTEXTUAL INQUIRY

This activity provides insight into one slice of the process. It helps see people in the environment where they use the product, and what unique challenges and opportunities it presents.

REQUIREMENT	Schedule 5 one-on-one sessions; provide time for a structured interview and for unstructured observation.
INTERVIEW	Before arriving, script a series of structured questions about the journey and about the workflow of the user. Plan for a 45 minute conversation. When possible, bring along a colleague to take notes. Record this session for later reference.
OBSERVATION	Depending on the task, schedule a 2-6 hour block to observe people using the product. It's important that this happens in the environment where they'd be interacting with the product (i.e., an office, their desk, a coffee shop).

For best results: Assure participants that you're learning more about their environment, not testing their ability to use the product well.

Too often, in-flight products falter because processes are stapled onto the people building the product-not the people using the product. Talk to the people intended to use the application to know what's at stake. Keep users involved throughout the process. Service design provides the framework for this effort.

ANALYZING DEPENDENCIES & DOWNSTREAM IMPACT

Next up, evaluate the factors that keep the product and experience running. What tech needs to be in place to jumpstart the process? What needs to happen to keep the product working? Having a clear understanding helps paint an even more fulsome picture of the entire experience.

Upstream dependencies: The early steps in the journey, as well as other technical and organizational infrastructure that needs to work for a journey to start

The downstream dependencies: The nextstep products or workflows, as well as the on-going lifecycle of customer experience management

Once identified, share findings with relevant teams as early as possible. These hand-offs become opportunities to build in advantage by coordinating across the experience for the customer.

RISKY BUSINESS

Each product is funded and prioritized on an individual basis. The teams tasked with delivering successful outcomes work towards given goals. As time goes on, they discover new dependencies-some of which may fall outside of existing funding initiatives. Often, to achieve objectives, teams create workarounds. While each product may individually hit the targets, the collective goal of providing a world-class customer experience falls short.

Fixed budgeting and planning cycles do not preclude teams from leveraging service design. Carve out time ahead of large planning and funding initiatives to build cross-team service blueprints that detail the entire desired customer experience and call out unknowns along the way. On smaller teams and efforts, use the same activity to build consensus among everyone involved.

CREATE A SERVICE BLUEPRINT

One service design method that has the power to bring many factors to the forefront is the service blueprint. Just as an architecture diagram creates alignment for approaches to building, a service blueprint provides insight into shared responsibilities, the flow of information, and the dependencies of the system. It accounts for user roles, internal business rules, and actions taken by the people and technology involved. Rather than segmenting responsibilities by functional group or working team, a service blueprint orients to the customer's experience with the product. This brings together the business operations and customer touchpoints into a holistic view of the system supporting it.

Service blueprints are oriented around a customer's experience across each touchpoint they have with the product. It is a series of moments lined up over time, with lines connecting the moments to track who owns each part of the process being successful. New risks and opportunities emerge. Each aspect of the experience individually in dedicated lanes and aligning each activity over time clearly showing what is happening at every moment, and who is driving progress forward.

THE PRODUCTION

A great digital experience is similar to creating a well-rehearsed stage production. Similarily, a service blueprint uses terms familiar to the theater world like roles (e.g., the customer) and front and back-stage activity (e.g., the interface/the internal processes).

There are three essential actions needed for effective service blueprints.

- 1 Document the customer journey
- 2 Orchestrate a seamless experience
- 3 Track technical and support processes

Let's take a closer look at each.



DOCUMENTING THE CUSTOMER JOURNEY

Mature delivery teams know the value of a user-centered approach. In practice, a service blueprint takes a wider view of the customer's journey–including moments before, during, and after using the product. Understanding the moments just before and immediately following using a product allows for the intentional design of both the onboarding and offboarding experience. Using an example of ordering a pizza, being hungry, and eating the pizza are the important parts of that journey. The app used to order it is the conduit for value.



MOBILE DELIVERY

Each action the customer takes builds the foundation. Their actions are supported by the touchpoints they have with the front-stage experience. With the customer driving the process, the app used to order the pizza comprises the front-stage of the experience. Their touchpoints with the app move their journey forward. Each of these touchpoints through the front-stage drive additional action behind the scenes. The back-stage roles include the pizzeria team making the pizza and the driver delivering the pizza. There are additional support processes involved, for example, the pizzeria's equipment and appliances, the navigation app used for delivery, and the systems of order management and payment processing.

Consider each possible interaction, active and passive, that a customer might take through various touchpoints (e.g., seeing pizza ads, ordering a pizza via mobile app, receiving push notifications/emails). The front-stage experience is often the interface of the application but can also be a direct interaction with another person or other explicitly customer-facing aspects of the process, such as forms and printed material. Tracking each of these individually helps to identify the subsequent back-stage processes that make everything possible.

When drafting the customer journey, document the best planned path through the system. Exercise caution when crafting this picturesque state, as too-perfect-case scenarios could provide an unrealistic baseline for future decisions. Anchor these explorations to reality. To do this, interview prospective users. Talking to sample users with structured interviews provides actionable data to drive better understanding and deliver a successful experience.





ORCHESTRATING A SEAMLESS EXPERIENCE

There are two operational aspects documented in a service blueprint: the front-stage and backstage. The actions taken within these parts of the experience include back-of-house processes and operational duties that impact success or failure. The quality of the experience is defined by how well back operations support the front-stage experience (and vice versa). Back-stage operational efforts and systems support their front-stage counterparts (e.g., automated processing, shared microservices, and individuals or departments that require additional manual steps to complete a task). Successful front-stage and back-stage processes generate both operational and performance success.

THE PLACEMENT	THE DEFINITION	EXAMPLES
Front-stage	Customer-facing options presented to the user for interaction	The customer gets a text alert that the pizza's on the way (e.g., phone calls, mailings, forms, and applications = front-stage)
Back-stage	Supporting elements that drive success not visible to the customer	An employee checks if the pizza order is right before handing it off for delivery (e.g., order management)



These processes create the customer's expectations and impressions of the experience. Each interaction contributes to a successful or failed outcome for the customer journey. Documenting each touchpoint, along with the rationale behind each action, is important for tracking results. Identify internal metrics for handoffs within the workflow, including response time, processing time, and transactions processed over time.



TRACKING TECHNICAL & SUPPORT PROCESSES

The supporting processes are the glue that holds the entire process together. Supporting elements of the infrastructure (e.g., automated processing engines, recommendation frameworks, or external dependencies for information and services) are not always in the team's immediate control. Regardless, the team still needs to understand the constraints and limitations supporting elements present. Good or bad, within the team's control or not, support processes impact the product's success.

When support processes drive the experience, customers are hands-off. Therefore, their expectations need to be managed from start to finish. To track successful outcomes, document each supporting interaction noting which system or group owns each action and what actions define success.



- 1 Draw the lines of interaction to show how agency moves within the system, and which moments in time are dependent on triggering the next moment. As a result, individually measurable moments that impact the customer experience are uncovered.
- Compile a list of moments to factor into the backlog and actionable items to tackle in the build.
- ³ Compare the list of opportunities against business priorities. The overlap between the two, informed by the challenges in the system, is the strongest space to begin building the initial product release.
- Consistently review and iterate on the service blueprint. Throughout each release, the experience changes. The document should continually evolve, serving as a common reference point for stakeholders and team members-as well as designate a healthy regular release cadence for the product and future dependencies.

EXAMPLE OF SERVICE BLUEPRINT



TECH DRIVES BETTER OUTCOMES

THE COMPANY

A multi-billion-dollar transportation solutions organization provides intermodal, drayage, shipping, truck brokerage, and logistics services. Known as a world-class industry leader, the enterprise has a longstanding proven track record of success. The company offers comprehensive services for clients in the US, Canada, and Mexico.

THE NEED

The shipping and logistics industry is in a technology and staffing arms race. In addition to increased demand for staff, logistics organizations are grappling with the ever-shifting complexities of a changing climate and upstream dependencies from suppliers and customers. For an industry where seconds count, the need to remedy inconsistent workflows and legacy technology issues are very real. Hampering an employee's ability to operate effectively from the road or away from the office can directly undercut the bottom line. Industry peers were already investing in tech and realizing returns, where this organization was lagging. The enterprise needed to figure out how to keep pace and leapfrog competitors. The company turned to Devbridge for strategic support to determine how tech investments could both match and undercut rivals.

THE APPROACH

The Devbridge team mapped out a strategic discovery plan-leveraging service design principles-to determine how to close the tech gap relative to competitors, offer table-stakes functionality, and differentiate. To better understand the current state and future state, the team sought to validate and discover distinguishing features, confirm assumptions around valuable carrier functionality, uncover unknown needs, and gain contextual insights into the overall brokerage ecosystem. The team facilitated a series of activities including 1:1 carrier and dispatcher interviews, onsite observations of current load and dispatch workflow, competitive analysis of portals and use, an extensive list of suggested differentiators, and defining the dispatch persona and workflow.

THE OUTCOME

Armed with deeper insights into the company needs, limitations, and competitive research, the team generated a robust strategy for a custom multi-faceted logistics platform. These findings informed the creation and prioritization of design assets for custom software development. Ultimately, the insights not only de-risked a future investment, they also offered a more fulsome picture of next steps for design, prototyping, and delivery. The company was now equipped with a clear plan to build a well-designed product with multimodal options and recommendations to drive value, increase market share, and address operational efficiencies.

IN CONCLUSION

Embedding service design delivers a stronger experience for those interacting with a product. Breaking down the product and experience into moments enables each element to be prioritized, understood, and ready for iteration. By documenting people's roles and interactions with the product, the build is poised to include all necessary perspectives. Accounting for the product environments and use conditions sets the course build elements (e.g., internationalization, layout, color considerations, data density) targeted to deliver the optimal performance.

> An identified current state What exists to date?

A targeted future state What is the end goal?

External factor research What impacts the experience?

Defined dependencies What needs to happen for the product to work? Then design the service blueprint based on the collective findings influencing the entire experience, including:

A documented customer journey What happens before, during, and after using the product?

A well-produced experience What are the front and back-stage factors influencing the outcome?

A clear understanding of technical support processes

What drives the experience outside of the customer?

Map out the front and back-stage experiences, support processes, dependencies, interactions, pain points, and risks for a fulsome picture of the product. Rather than discovering issues mid-flight, identify, and plan for possible obstacles. Like a formula one driver scoping the curves of a racecourse, the team sees the path ahead and adjusts to new conditions as they present themselves.

In addition to a well-analyzed problem space, nothing is more powerful than getting everyone into a room for a focused meeting to answer the question: "Why aren't we building software yet?" The nuances and challenges are unique for every product. That said, a structured workshop uncovers and examines each aspect of a digital product. Our experience has shown that there is no replacement for a focused collocated working session to kick off the project together.

GET STARTED WITH A LEAN **REQUIREMENTS WORKSHOP**

Put custom software development on the fast track. First, get key stakeholders in one room. Then, let our product development team orchestrate the ultimate workshop. Without fail, we get the stakeholders aligned in a couple of days-which is more than most companies can do in months.

One rule: Don't bring documentation.

SIX KEY OUTCOMES

- 1 **Defined business goal** 4 Shared understanding A clearly defined business goal A shared understanding of the business with success metrics process, end users, and their pain points 2 **MVP** requirements 5 **Scope & priorities** The minimum amount of to meet the business goals requirements necessary to kickoff the design process
- **Hidden requirements** 3

Bringing people from different functions together to uncover what impacts goals, scope, and priorities

An agreement on scope and priorities

6 **Product release strategy**

A phased approach to releasing your product to market



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LEAN REQUIREMENTS WORKSHOP ACTIVITIES







Users, Roles





Map



Risks and Impediments



Technical Feasibility

AUTHOR

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Prior to Devbridge, Chris worked with Pivotal Labs and ThoughtWorks in several product design roles for FORTUNE 100 companies. Chris uses his breadth of experience to help bring the power of user-centered design to our clients and their customers.

Special contributions by:

Sarah Santi, Product Design Manager



Our experienced teams deliver software **4x faster** than the industry average.

We are a full stack research, design, and software delivery company. Our teams facilitate a creative, iterative process, powered by some of the most passionate individuals in the industry. We build extraordinary custom applications that solve complex problems and deliver measurable results.

Our scalable cross-functional product teams and tailored services transform businesses in agriculture, aviation, financial services, fraud & forensics, healthcare, hospitality, logistics, and manufacturing.



Mobile applications for B2B and B2C

We create elegant, intuitive mobile applications to enhance the customer experience.



Product research and design

We build custom applications that solve real business problems to drive measurable value.



Scaling product delivery

We go beyond team aug and dedicate full cross-functional teams to scale feature delivery.



Legacy software modernization

Replatform aging systems and legacy architecture to meet the needs of your business now.



Data strategy and microservices

From dashboards to master data strategy, we can help you leverage your data to grow your business.



Workflow optimization

Streamline your business processes to reduce time, costs, and improve productivity.



Full-time employees

> 5 Offices

Years in business

