

SERVICE DESIGN GUIDEBOOK



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④ Review info from driver

⑤ Based on info received from driver he determines how to stage the freight

⑥ No ... the info to the driver ...

⑦ He creates travel copies and pass them to the deck foreman

⑧ He pass info down to stage freight to ... foreman //verbal or radio//

My copy of the ...

... on all pallets ...

→ priority of loading ...

→ number of skids ...

when to freight is loaded, driver enters number of ... left his position (possibly ...)

... goes to next location ...

⑩ He ... info to vehicle door should be ...

⑪ he goes to the office, do the work //give back the copy with the number, date ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...

... on all pallets ...



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Introduction to
Service Design

What is it and why do we need it?

**“Integrated systems:
When everything is
connected to
everything else, for
better or worse,
everything matters.”**

“Massive change” B. Mau



Defining Service Design

Service Design is a holistic approach used for solving problems in complex environments. It has tools that facilitates interdisciplinary team communication and alignment.

Service design uses human-centered techniques to approach solving problems that span over time and/or across media/channels. It examines the service delivery experience across operations via the technology while placing equal value on customers and business processes. Service design is distinct from product design, interface design, and interaction design but uses some of the same skills and intersects with those disciplines as well.

As products are no longer point solutions but services that are multi-user and omni-channel, new tools have been developed to orchestrate these touchpoints for a unified experience. Service Design helps to both innovate and improve already existing services and systems. The aim is to design not only overall experience, but also the strategy to provide that experience.

What is a Service?

The term service design causes some confusion. Let's be clear – the term service design is not restricted to traditional service industries such as hospitality or strictly to a business unit with “Services” in the title like Professional Services or Managed Services. It is talking about any solution that is “in service to” (ie. providing value to) the end-customer. Alternative names for this are often system design or ecosystem design because inherently we are talking about a solution that is interconnected, not stand-alone.

Quick Checklist

Think about the solution you are working on. If one or more of the statements below are true for your solution, service design is likely the appropriate method to apply to its development:

- Some aspect of the solution is an intangible product (data from sensors, experiential elements)
- The solution can be accessed from more than one type of interface
- The solution is useful to more than one type of user
- The solution can be accessed at different points in a work flow
- The solution has interdependencies to other parts in a larger ecosystem of technology
- Multiple technologies need to integrate to make the solution work

When Should I Consider a Service Design Approach Instead of My Old Way?

Question	Service Design is appropriate if...	Linear product design may be better if...
Is the problem human-centered?	Deep understanding of the actual people(users) involved is both possible and important.	There are few human being involved in the problem or the solution.
How clearly do you understand the problem itself?	We have a hunch about the problem and/or opportunity, but we need to explore and get agreement.	We understand the problem clearly and we are sure we are solving the right one.
What's the level of uncertainty?	There are many unknowns (large and small), and past data is unlikely to help us.	The past is a good predictor of the future.
What's the degree of complexity?	There are many connecting and interdependent facets of problem; it's hard to know where to start.	The path to solving the problem is clear and analytic methods have succeeded in solving similar problems in the past.
What data is already available to you?	There is very little relevant existing data to analyse.	There are several clear sources of analogous data.
What's your level of curiosity and influence?	I'm excited to explore more and can get a group of people willing to help me.	The problem feels routine to me, and I have to follow existing processes system.

"Adapted from: *The Designing for Growth Field Book: A Step-by-Step Project Guide*," Jeanne Liedtka, Tim Ogilvie, and Rachel Brozenske

Need for a Paradigm Shift

We live in an interconnected world of smart products and environments. It is no longer sufficient to develop stand-alone, or point, products and solutions. We need to create unified functionality across products and solutions to have a consistent experience. Service Design provides the tools to do so. It enables to generate non-quantifiable insights with the same kind of rigor that applies to quantitative research and development techniques.

Many of our customers are already service providers. They are moving from process optimization to service (ecosystem) optimization to unify their business. Because they need a consistent service delivery system that is optimizes for the whole, not just it's isolated components.

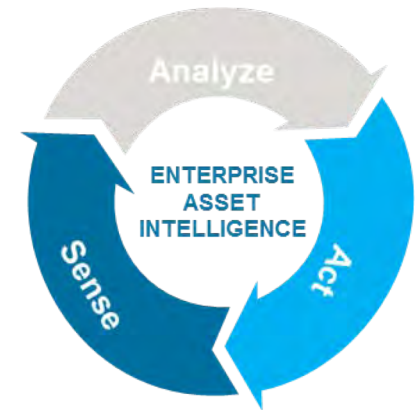
Through the service design approach, we can provide not only technology, but also partner with our customer to implement new end-to-end solutions within their company. This is a win for us, them, and their customers.

EAI Needs Service Design

Zebra is using service design because we are no longer only enabling sensing devices as point solutions but creating connected systems that enable the sense, analyze, and act. We call this ability Enterprise Asset Intelligence.

Our customers need solutions that allow them to make decisions in real time. They are no longer creating plans at the start of their day to be executed serially but have dynamic plans and we need to provide solutions that help them determine the next best move. With service design, the technological back-end of the service is architected from the start to connect the components of the solution rather than building them in silos that later have to be forced to work together through middleware or third parties.

Service design is the ideal tool when the system is complex, the variables to optimize are dynamic, there are many actors (users) and these actors have goals/ motivations. The product that Zebra is providing to the customer is the service, not a single unit of hardware or software. One of the implications is that interaction at one touchpoint effects actions further along the journey and so we need a way to understand these touchpoints, interactions, and business value across the journey.



The Business Value of Service Design

The outcome of successful service design is an end-to-end solution that has a consistent experience at every point as well as value extracted from each moment. **There will be both tactical fixes and strategic insights generated in the process.** Without taking the systems-level view approach of service design it is very easy to miss an opportunity to leverage value, to create an unintended negative consequence at another point in the journey and to have misaligned goals across product teams.

Other companies have been using service design to much business success to transform or re-energize their business. Often times it may not be called “service design” per se because the term itself is not well-known but often one can see services organizations using human-centered design thinking to achieve the desired results. The Design Value Index (DVI) is a portfolio of 16 publicly traded stocks from companies considered to be “design-centric” contingent on a set of criteria, as determined by the Design Management Institute. **The 2016 review was the third year in a row where returns of the DVI were in excess of 200% over the S&P 500** (Rae, 2016). There are many specific case studies that can be found in the resources in the Appendix.

Rae, J. (2016, December). *2015 Design Value Index Results and Commentary*. Retrieved from Design Management Institute: <http://www.dmi.org/default.asp?page=DesignValueIndexRes>





Introduction to Zebra's

Enterprise Service Design Process

“The true service experts are the people that deliver service everyday. (...) service employee have extremely detail knowledge about what creates value for the customer and what works for business. Involving staff in creative design help decrease your chances of failure.”

“A Practical Guide to Optimizing the Customer Experience. Service Design for Business” B. Reason, L.Lovlie, M.B.Flu



Blueprint 101

One of the most recognizable aspects of the service design process is the development of a document known as a Blueprint. It is important to understand how it is intended to be used before we go into the details of the overall process. These can be used to document current state, but for our enterprise process, we are using this to come to a strategic vision of the future state.

Blueprinting displays the ecosystem-level scenarios that span and intersect across a web of offerings related to the service and shows how the different layers connect. This high level view allows for there to be alignment across all stakeholders for what the process should look like and provide enough information for a product or interface designer to delve into a single touchpoint.

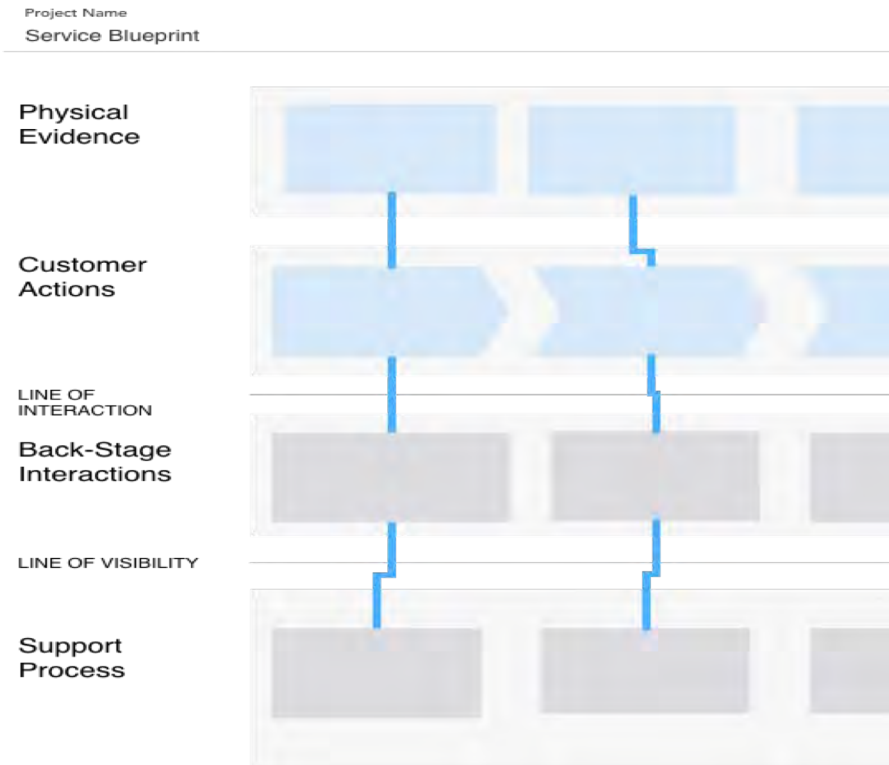
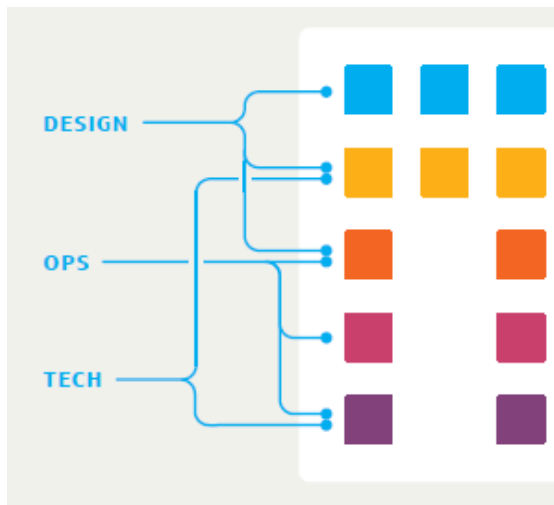
Because service designers understand how to integrate multiple systems, they are able to help coordinate the cross-functional effort of designing the service; comprised of many different teams and stakeholders behind the scenes. Everyone contributes to the creation of the blueprint and aligns on the details described on the next page.

Anatomy of a Blueprint

The Service Blueprint is traditionally a swim-lane diagram with two halves, as in the template on the right. The top half shows the “front-stage” actions of the service experience and the bottom half shows the “back-stage” systems needed to enable the front-stage.

The blueprint shows actions across time from left to right, usually grouped into experience stages. The swim lanes are separated by lines of interaction (between actors in the system) and lines of visibility (to the underlying technology/enabler). Each column of boxes represents a service moment within the different experience stages.

The image below shows how different elements have key contributions across the disciplines.



(ABOVE) <https://www.graffletopia.com/stencils/1344>

(LEFT) Remis, N. (2016). *A Guide to Service Blueprinting*. San Francisco, CA: Adaptive Path.

Getting Started

This section describes what you need to know to get started using service design. While there are many books and articles to describe the service design methodology (see Appendix), we have created our own seven-step process that explains our approach for Enterprise systems.

We represented this process as a cycle because it is meant to be dynamic and repeatable. Note that the assets listed in the Outcomes are Tools not final deliverables. These maps are created to help the team think through the solution and service. You may decide that you don't need to use a tool, modify one for your use, or have to create your own. The level of fidelity is up to the designer – some may only need to be pencil to paper, others painstakingly created in Illustrator. These are living documents, not set in stone. These assets bring clarity to complexity and foster dialogue. As assumptions and conditions change, they need to be re-examined and updated.

These steps are meant to guide, not dictate, through the methodology. You may be asked to jump in at any part and need to repeat a few steps before moving forward. You may skip a step and go back to it, depending on what stage of the solution you are in or the complexity of the problem.

Creating new solution

Understanding existing state

7. Define strategic vision

Work with business and technical teams to plan holistic strategic vision and roadmap.



6. Determine interactions & implications

Zoom out and engage with internal and external stakeholders to understand implications of proposed design changes within system.



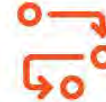
5. Create concepts

Generate experience driven concepts followed by interdisciplinary brainstorms.



1. Map existing systems

Analyze and visualize existing industry and customer processes - including people, actions, devices, information, and environments.



2. Identify known unknowns

Identify, document, and share gaps in research.



3. Discover opportunities

Synthesize insights to uncover opportunity areas.



4. Focus the scope

Zoom to an appropriate scale defined by relevancy, resources, constraints, feasibility.



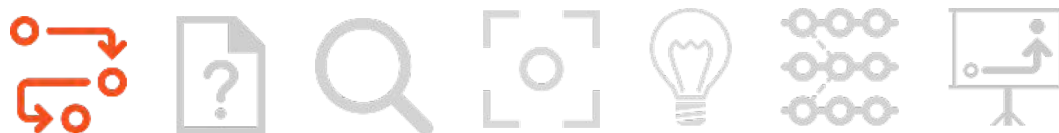


Pre-work – Project Vetting

- Identify program stakeholders
- Define project goals and objectives
- Determine time bounds
- Identify known and potential team members (resource plan)

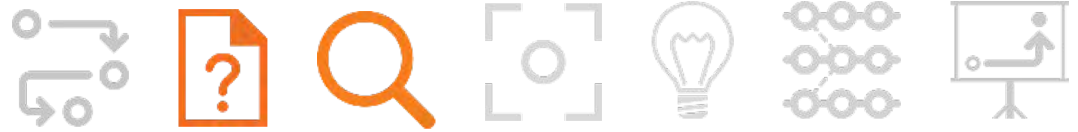
CORE TEAM

- Service Designer
- Solution Architect
- Business / Product Manager



Step 1 – Map Existing Systems

- **WHAT:** Look at end-to-end ecosystem
 - Locations
 - Users / Actors
 - Tools
 - Technologies
- **HOW:** Baseline & Generative Research
 - Review research reports (internal and industry papers)
 - Talk with SMEs, RPMs, Solution Architects
 - Field research
- **OUTCOME:** Journey Map, Personas, (hypothesis of solution?)



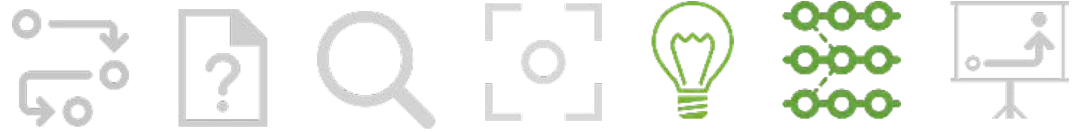
Steps 2 & 3 – Identify Known Unknowns & Discover Opportunities

- **WHAT:** Gap and Needs Analysis
- **HOW:** Analyze journey map, heuristics
- **OUTCOME:** Data Map with in, out, and dependencies between steps. Highlight pain points



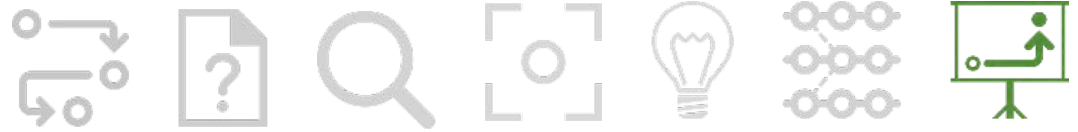
Step 4 – Focus the Scope

- **WHAT:** Define specific problem space within ecosystem
 - Locations
 - Users / Actors
 - Technologies
- **HOW:** Interdisciplinary team workshop & discussion
 - Review journey map and data map
- **OUTCOME:** Potential solution areas identified



Step 5 & 6 – Create Concepts and Determine Implications & Interactions

- **WHAT:** Define future state and enablers
 - New workflow / ecosystem vision within focus area
- **HOW:** Interdisciplinary team workshop & discussion
 - Brainstorm concepts
 - Build blueprint and review
- **OUTCOME:** Blueprint with well-defined front-stage and back-stage with identified means of enabling



Step 7 – Determine Strategic Vision

- **WHAT:** Create project(s) plan(s)
- **HOW:** Stakeholder review and program creation
 - Assign resources to create solution(s) identified in blueprint
 - Bring in larger team with broader skill set
 - Transition to traditional project/program methods
- **OUTCOME:** Solution definition and execution



On-going Work – Project Review

- Stay on project team, attend meetings, and advocate for design intent / ecosystem cohesion
- Review blueprint periodically to validate assumptions
- Research implications of solution implementation after release
- Update journey map, data map, and blueprint after release to include solution elements and determine next strategic area (Steps 1-4) for next project planning cycle

Roles Across Process Steps

These are the seven steps of the Enterprise Service Design process broken into the two halves. The service designer has a lead role in coordination and facilitation, but the entire team is needed to come to a solution.



UNDERSTANDING EXISTING STATE

1. Map Existing Systems
2. Identify Known Unknowns
3. Discover Opportunities
4. Focus the Scope



SERVICE DESIGNER:
Research

INTERDISCIPLINARY TEAM:
Scope Ecosystem



CREATING NEW SOLUTION

5. Create Concepts
6. Determine Implications and Interactions
7. Define Strategic Vision



SERVICE DESIGNER:
Concept Generation

INTERDISCIPLINARY TEAM:
Blueprint Workshop &
Strategy

Working Across Disciplines

This section describes different disciplines that may make up the team members. In order to create a solution that is frictionless across touchpoints, you need the teams building it to be all moving in the same direction. Inherent to this methodology is that it is collaborative across disciplines because these complex systems require a breadth of expertise to tackle these tough problems. The service designer facilitates and coordinates the activities to come to a unified strategy and vision for the future state.

Potential Team Members

- Business Development
- Technical Members (Engineers, Architects, etc)
- UI/UX Designer
- Product Manager
- Program/Project Manager
- Sales/Account Managers
- Customer / Partner

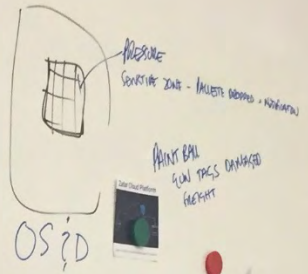


"REVERSE"
TLA
FOR UNLOADING
- MATCH w/ QR CODES

LIGHT
SYSTEM
FOR CONFIRMATION

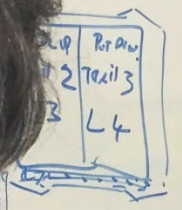
DAMAGE
WHAT
IS
RELEASED
BY?
WHO
DECIDES
ITS
DAMAGED

KEY
GATEWAY



= REF PALLET
- REF LOCATION

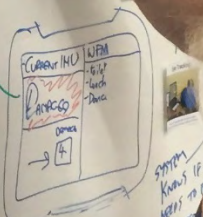
TAPE



INDIVIDUAL M...

SMART
PALLET

ALERT



IF SYSTEM HAS
FAILED

Communication Across Disciplines

Everyone comes to the table with different priorities. As the service designer, you have the entire system in mind but each stakeholder is interested in distinct parts. You need to distill the whole into these parts:

The what = Problem (*design/technical*)

So what = Solution implications (*product requirements*)

Now what = Action/plan (*project management*)

While there are distinct needs for each role, there are also communication styles that are particular to the individual. Not everyone receives information well in the same way! The following pages have personas developed for different roles within the service design team and what the service designer should be keeping in mind when communicating with each role.

BUSINESS

Project/Program Manager

- *Question:* "When will this be done?"
- *Responsibilities:* Top and bottom line, success of the project
- *Interests:* Process timeline (steps, dependencies), resources needed
- *Key Communication:* Next steps and action items
- *Tools:* JAMA, Gantt Charts

Product Manager

- *Question:* "What does the customer need that they will pay for?"
- *Responsibilities:* Determine business case for product
- *Interests:* Market size, customer needs, competitive landscape
- *Key Communication:* Implications of findings and insights
- *Tools:* Polarion



TECHNICAL

Systems Engineer / Solution Architect

- *Question:* “What are the components?”
- *Responsibilities:* Translate market requirements into product features
- *Interests:* Components, subsystems, integration needs
- *Key Communication:* Blueprint - backstage
- *Tools:* Polarion



TECHNICAL

Software Developer

- *Question:* “What’s the backlog?”
- *Responsibilities:* Develop backend systems to tie data to the interface(s)
- *Interests:* What data is needed to be consumed and where it comes from
- *Key Communication:* User behavior, Agile user stories
- *Tools:* JIRA, Developers toolkits, Coding language

Mechanical/ Electrical Engineer

- *Question:* “What is the screen size?”
- *Responsibilities:* Engineer physical tools to be used in the system
- *Interests:* Environment, infrastructure
- *Key Communication:* Physical and cognitive constraints
- *Tools:* Engineering software (3D modeling, board design), physical prototypes



DESIGN

Design Manager

- *Question:* “Have you thought about...?”
- *Responsibilities:* Advancing the role of design in the company
- *Interests:* What did you learn, how did design thinking create new value
- *Key Communication:* Insights leading to business wins, visual assets
- *Tools:* Powerpoint, quotes, videos, photos/visuals

UI/UX Designers

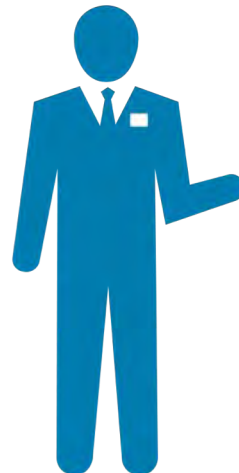
- *Question:* “Can I review the research?”
- *Responsibilities:* Design the interface and interactions of the service
- *Interests:* Design requirements, user goals/motivations
- *Key Communication:* Maps, Personas, Blueprint
- *Tools:* Illustrator, Sketch, Zeplin, Invision



SALES

Account Team

- *Question:* “How many SKUs is this?”
- *Responsibilities:* Build relationship with customer for repeat business
- *Interests:* Making sales
- *Key Communication:* Value proposition, differentiation from competition/ current state
- *Tools:* Phone, Powerpoint



Professional Services

- *Question:* “How does this scale? Generalize to other customers?”
- *Responsibilities:* Provide product support services such as deployment, set-up, configuration, maintenance
- *Interests:*
- *Key Communication:* Back-stage
- *Tools:* Excel, Visio

EXTERNAL

Customer

- *Question:* “Why do I need this?”
- *Responsibilities:* Continuously improve business for new profit opportunities
- *Interests:* Growing their business, increasing efficiency, differentiation from competition
- *Key Communication:* Value creation
- *Tools:* Phone, Powerpoint

Partner

- *Question:* “How can I use this to help my business?”
- *Responsibilities:* Integrate their offering with our products for revenue stream
- *Interests:* Growing their customer base and revenue potential
- *Key Communication:* Integration
- *Tools:* Phone, Powerpoint





Appendix
Resources

“When systems fails we become temporarily conscious of the extraordinary force and power of design, and the effects that it generates. Every accident provides a brief moment of awareness of real life, what is actually happening, and our dependence on the underlying systems of design.”

“Massive change” B. Mau



Books:

- B. Reason, L. Lovlie, M. Brand Flu: *A Practical Guide to Optimising the Customer Experience. Service Design for Business*, Hoboken, New Jersey, John Wiley& Sons Inc., 2016
- R. Curedale: *Service Design Process & Methods*, Los Angeles, Design Community College Inc., 2016
- B. Mau: *Massive change*, London, Phaidon Press Limited, 2004
- B. Martin and B.Hanington: *Universal Methods of Design*, Beverly, MA, Rockport Publishers, 2012
- B. Solis: *X=Experience when Business meets Design*, Hoboken, New Jersey, John Wiley& Sons Inc., 2015
- J. Helfand: *Design the Invention of Desire*, Haven, Yale University Press, 2016

Online resources:

- "This is service design thinking":
https://issuu.com/noeemi/docs/this_is_service_design_thinking_-_s
- "The service innovation handbook"
https://issuu.com/bis_publishers/docs/the_service_innovation_handbook
- "Design Transition" :
https://issuu.com/bis_publishers/docs/design_transitions
- Service Design Toolkit:
<http://www.servicedesigntoolkit.org>
- Practical Service Design:
<http://www.practicalservicedesign.com>
- Veryday Service Design Whitepaper:
https://issuu.com/veryday/docs/veryday_whitepaper_servicedesign
- Service Design Network
<https://www.service-design-network.org/>

Factors Influencing Explosive Growth of Service Design

Economic

“As economies mature, they move from agriculture to raw materials to manufacturing services. This trend is macro one and has taken place in much of the world. Service composite 70%-80% of the economies of mature countries and are growing rapidly even in big producer countries such as Brazil.(...) The achievement of design in manufactures is well documented- in industries from automotive to electronic. Design needed to develop to offer these qualities to a new market. “

Social

“Consumers are expecting more as they value their own entitlements more than previous generations. (...) This trend bleeds into the business-to-business area. Workers used to put up with experiences that were suboptimal and take the burnt of the pain with the logic that they could learn their way around and it was a part of job. Now the example set by the best consumer services leads people to expect the same at work. As expectations rise, the need to understand customer needs and expectations develop in parallel. Service Design is one strong way to bring the new customer the power into the design and improvement of service in a structured and productive manner.”

Technological

“The fact that what were primarily human-delivered service are now mediated by technology has driven the need for service design. Technology can dehumanize and make things harder to navigate for customer and less flexible. Service design offers tools to domesticate and humanize technology. (...) We are all aware of the impact of the digital revolution. It may be a cliché, but digital technologies have driven radical change and disruption in the service sector”

“Starting point in design is empathy with the human and their experiences. When a business challenge involves being successful with customers, or inspiring staff to adopt new processes or way of working, that is a great advantage. Seeing the business through your customers’ eyes can help people from CEO to operational teams to make better decisions. ”

“A Practical Guide to Optimizing the Customer Experience. Service Design for Business” B. Reason, L.Lovlie, M.B.Flu



