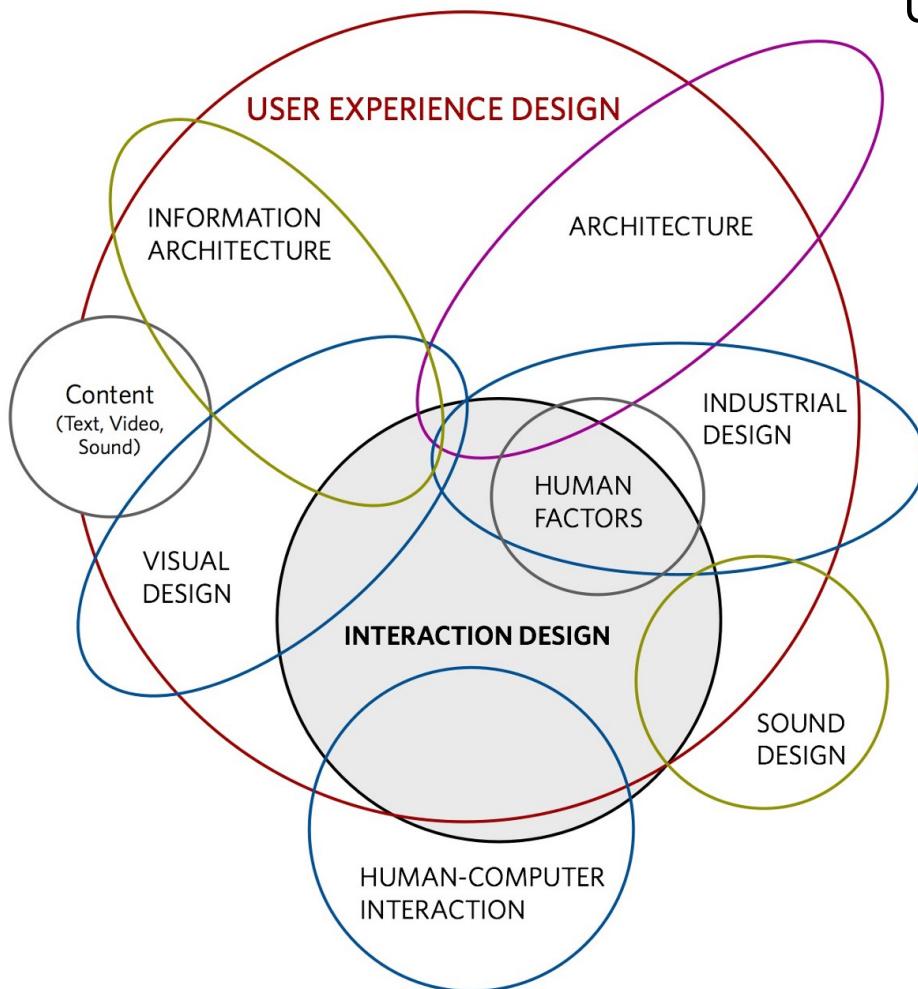


# UX

## User Experience Design Methods (for CEOs & CPOs)

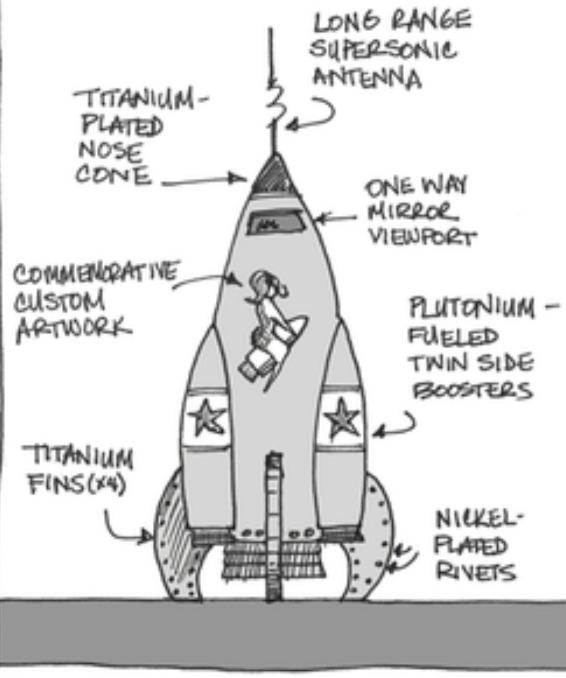


#42Entrepreneurs  
How to CTO conference  
25/6/2019

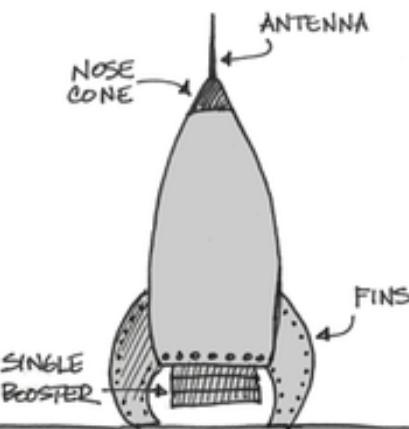
Frederique Krupa,  
PhD Université Paris 1  
fkrupa@student.42.fr  
Twitter: @frede\_sib

# THE UX DESIGNER PARADOX

WHAT WE DREAM  
UP AT KICKOFF



WHAT WE SETTLE  
FOR AT LAUNCH



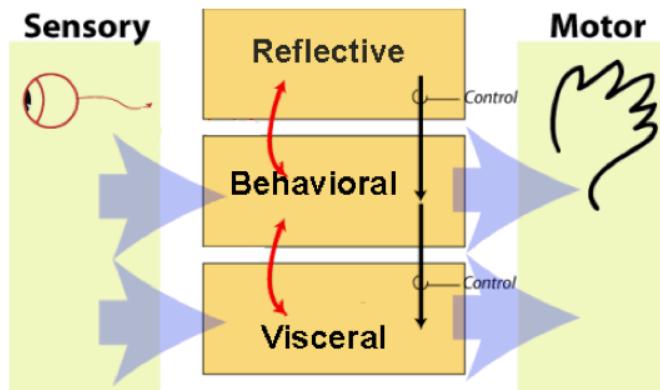
WHAT THE  
USER NEEDS



BONUS 2015



# what is design and how does it operate?



Donald Norman: Design of Future Things  
<http://itunes.apple.com/fr/itunes-u/human-computer-interaction/id384230043?ls=1#>

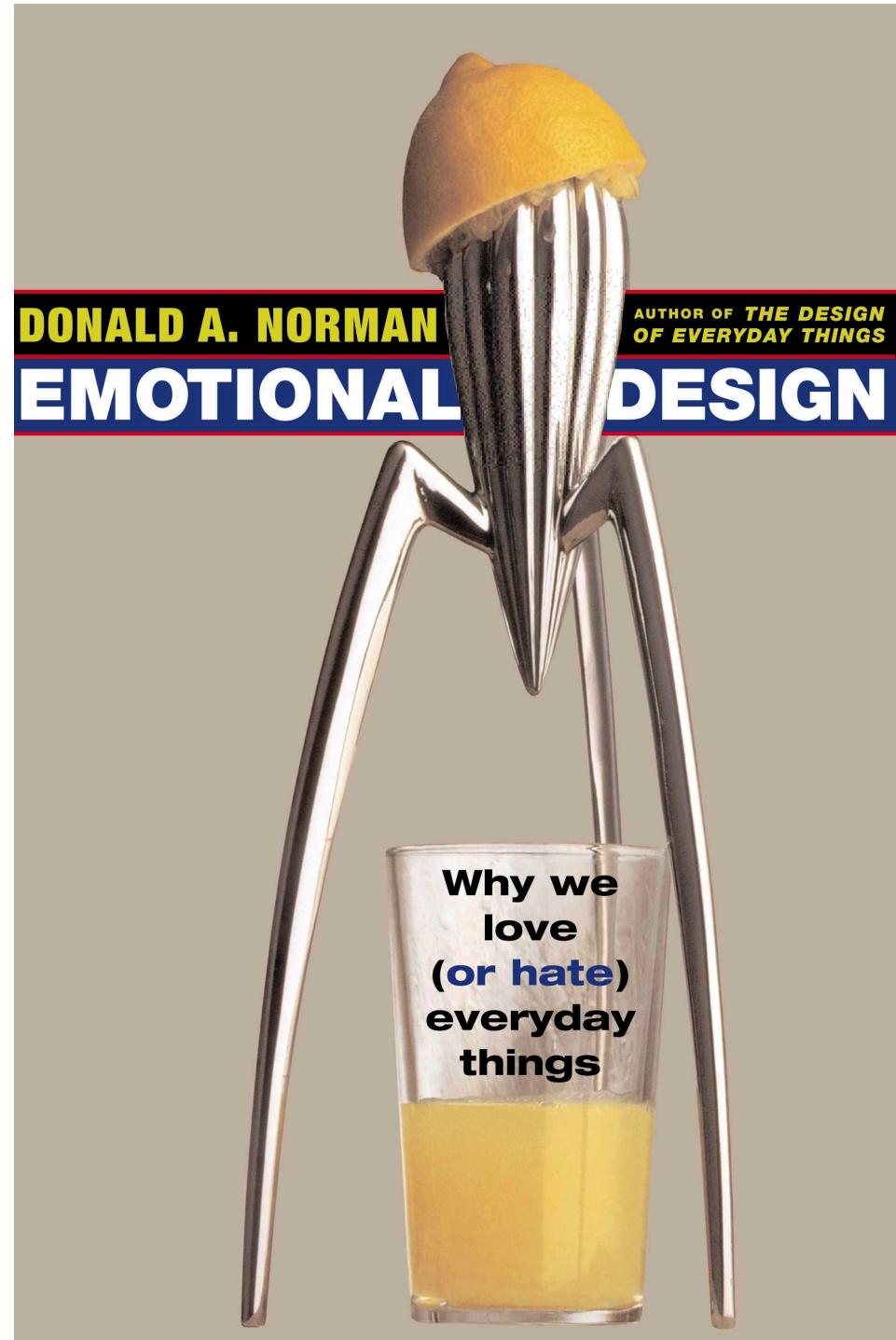
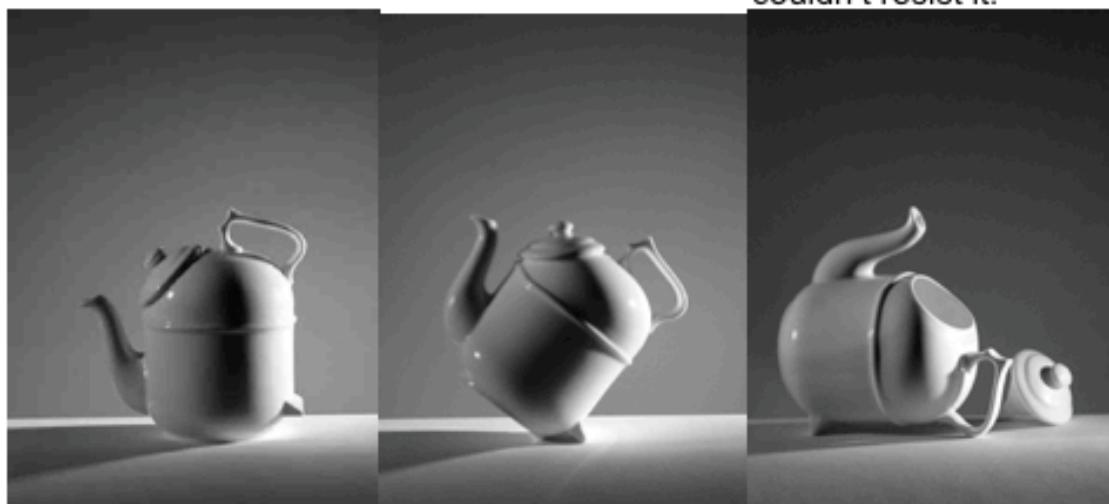




Figure 0.1 My impossible teapot.<sup>2</sup>



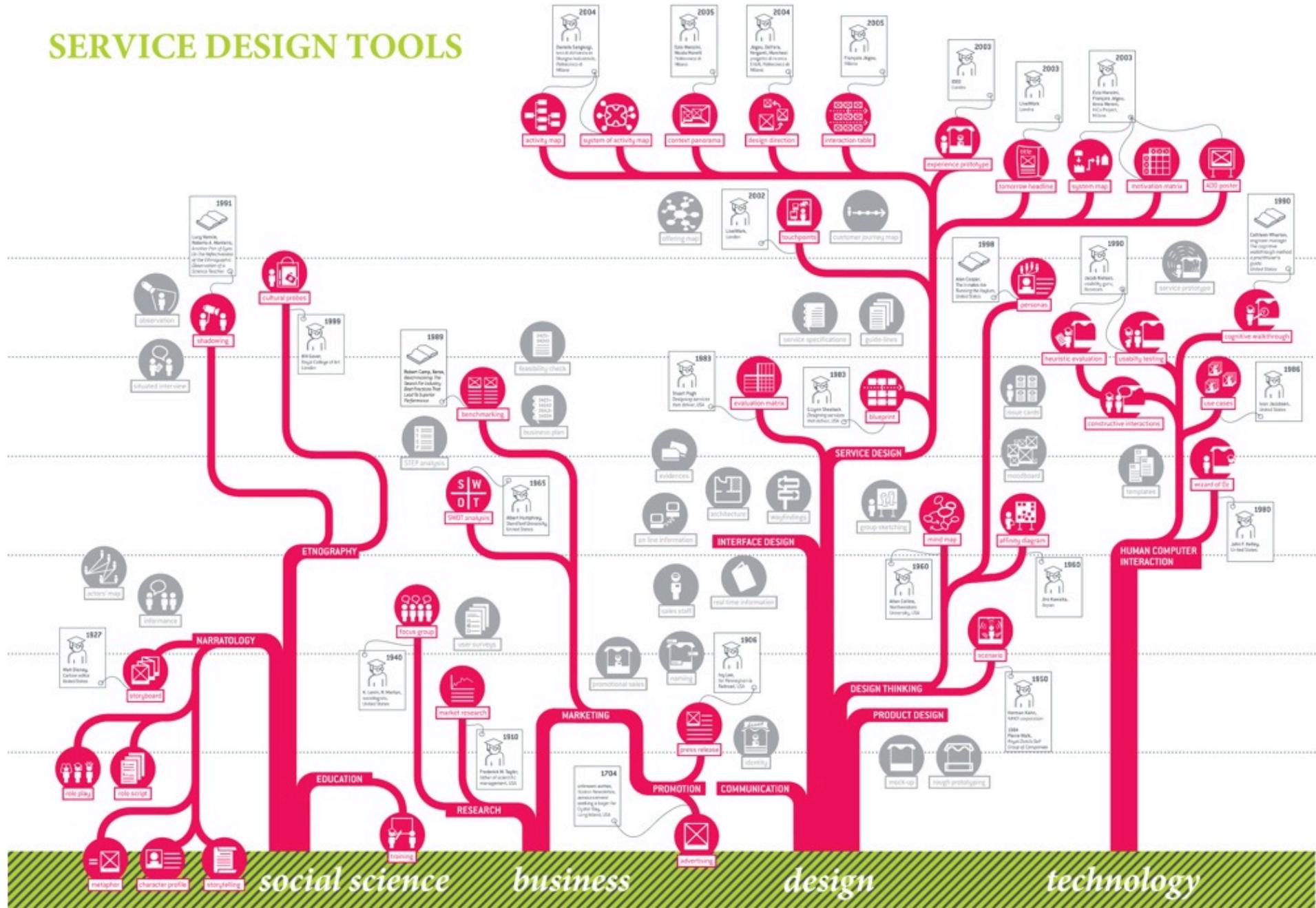
Figure 0.2 Michael Grave's Nanna teapot. So charming I couldn't resist it.<sup>3</sup>

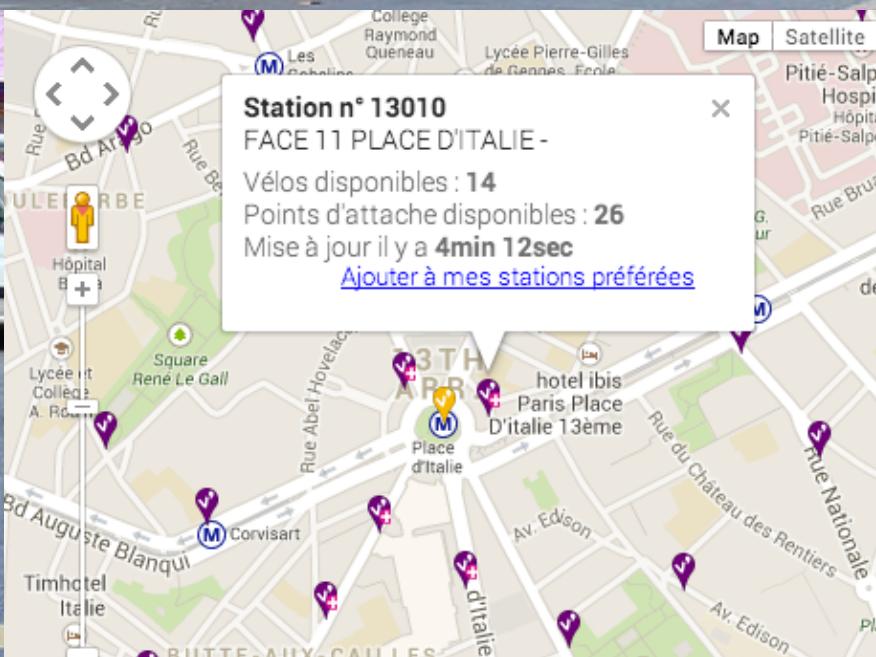


**Figure 0.3 The Ronnefeldt “tilting” teapot.** Put leaves on the internal shelf (not visible, but just above and parallel to the ridge that can be seen running around the body of the teapot), fill with hot water, and lay the teapot on its back. As the tea darkens, tilt the pot. Finally, when the tea is done, stand the teapot vertically, so the water no longer touches the leaves and the brew does not become bitter.<sup>4</sup>



## SERVICE DESIGN TOOLS





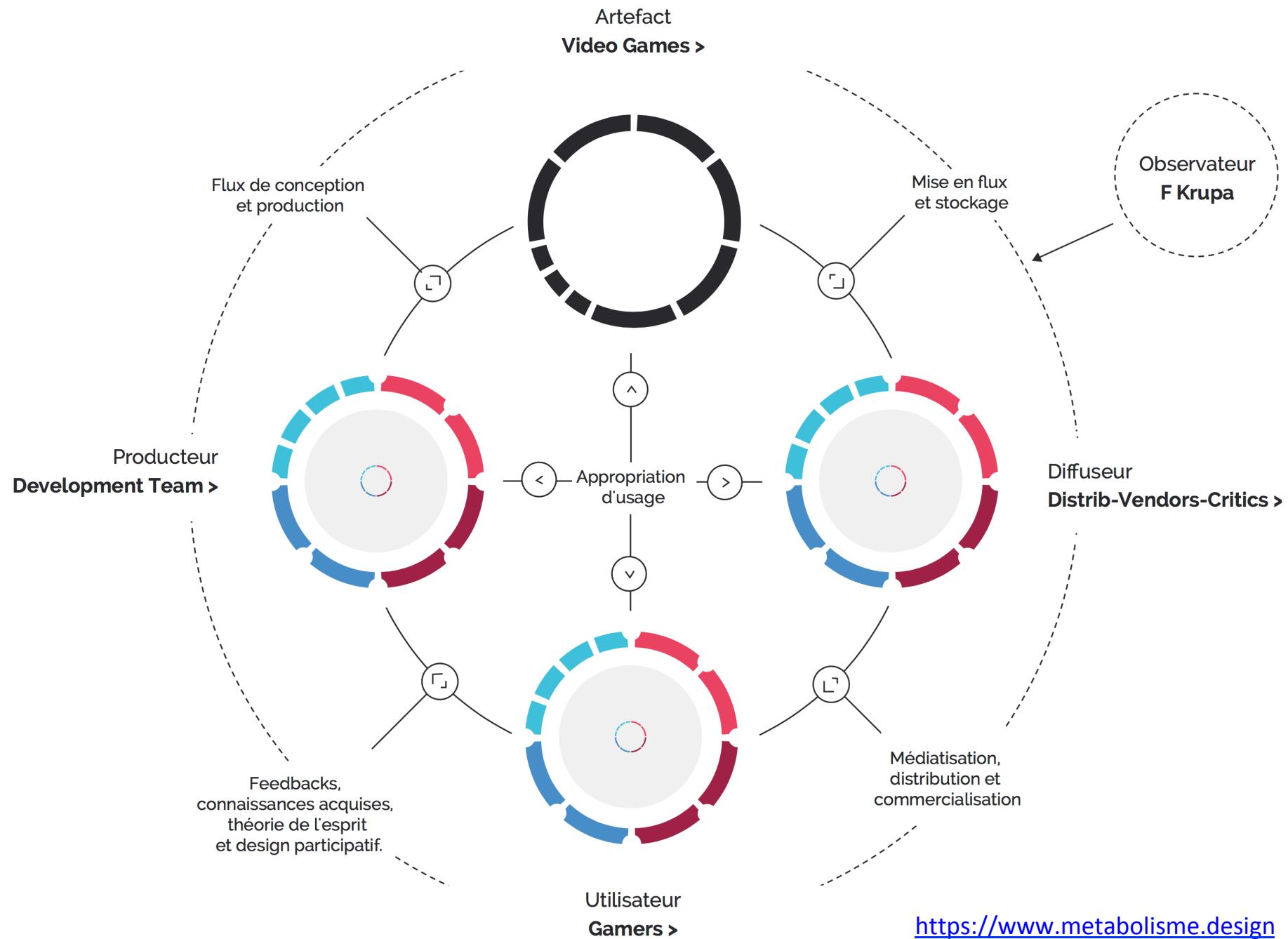
# Basic UX Design Methodology:

## Phase 1

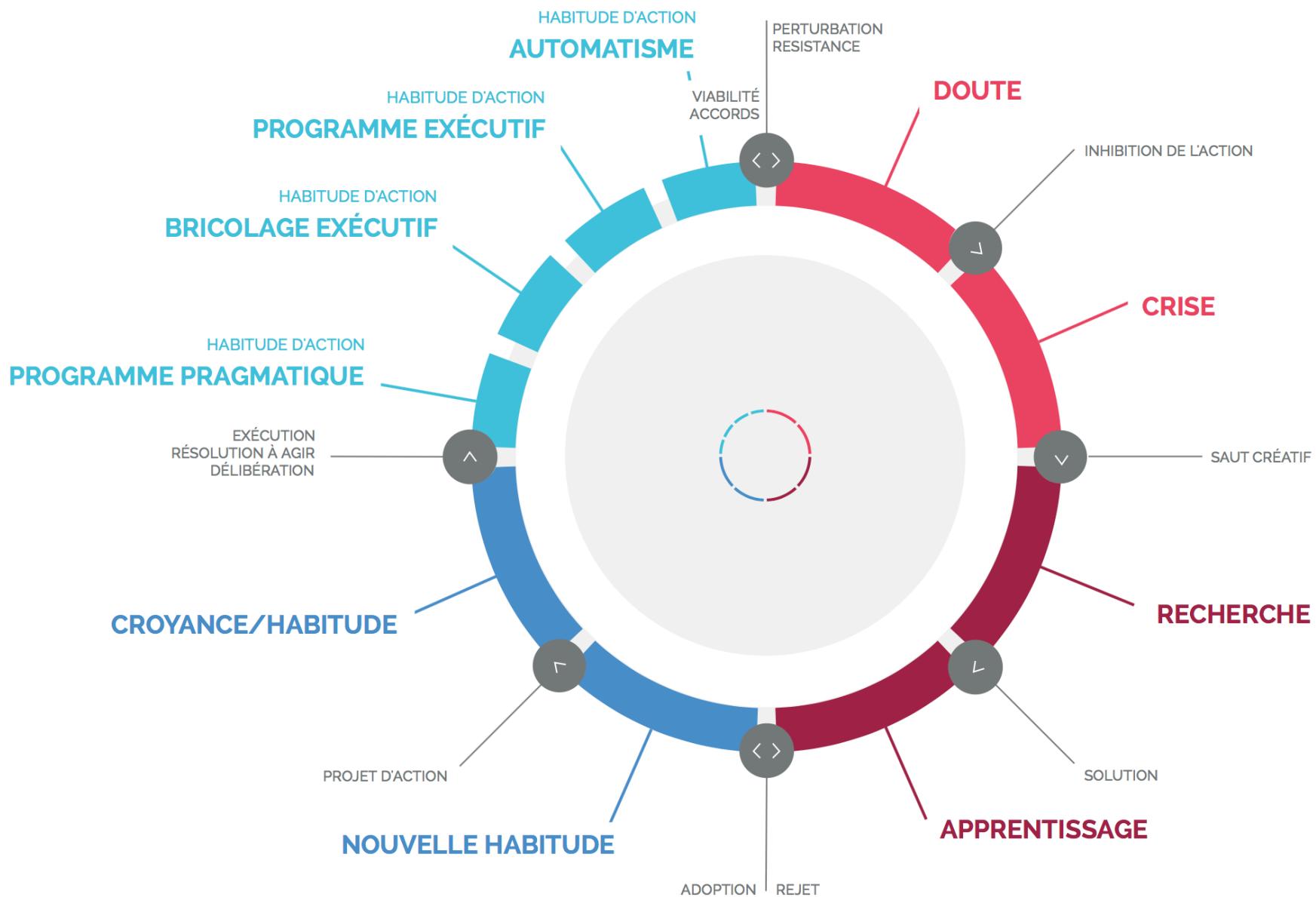
- Define the product, service, software, or system through its:
  - **Features**, *what is notable...*
  - **Functions**, *what it does..*
  - **Affordances**, *how we recognize and understand its capabilities*
  - **Constraints**, *what limits are in place for health, safety, IP, etc.*
  - **Conventions**. *what are the domain's UI or social conventions?*
- Define **all** your stakeholders and their needs:
  - Prioritize stakeholders (the least capable user determines the features of your design)
  - Prioritize needs for each stakeholder, as well as amongst stakeholders (this will help determine the functions in your initial prototype and later stages of your product roadmap.)
  - Remember the artefact's entire lifecycle, including maintenance and EOL

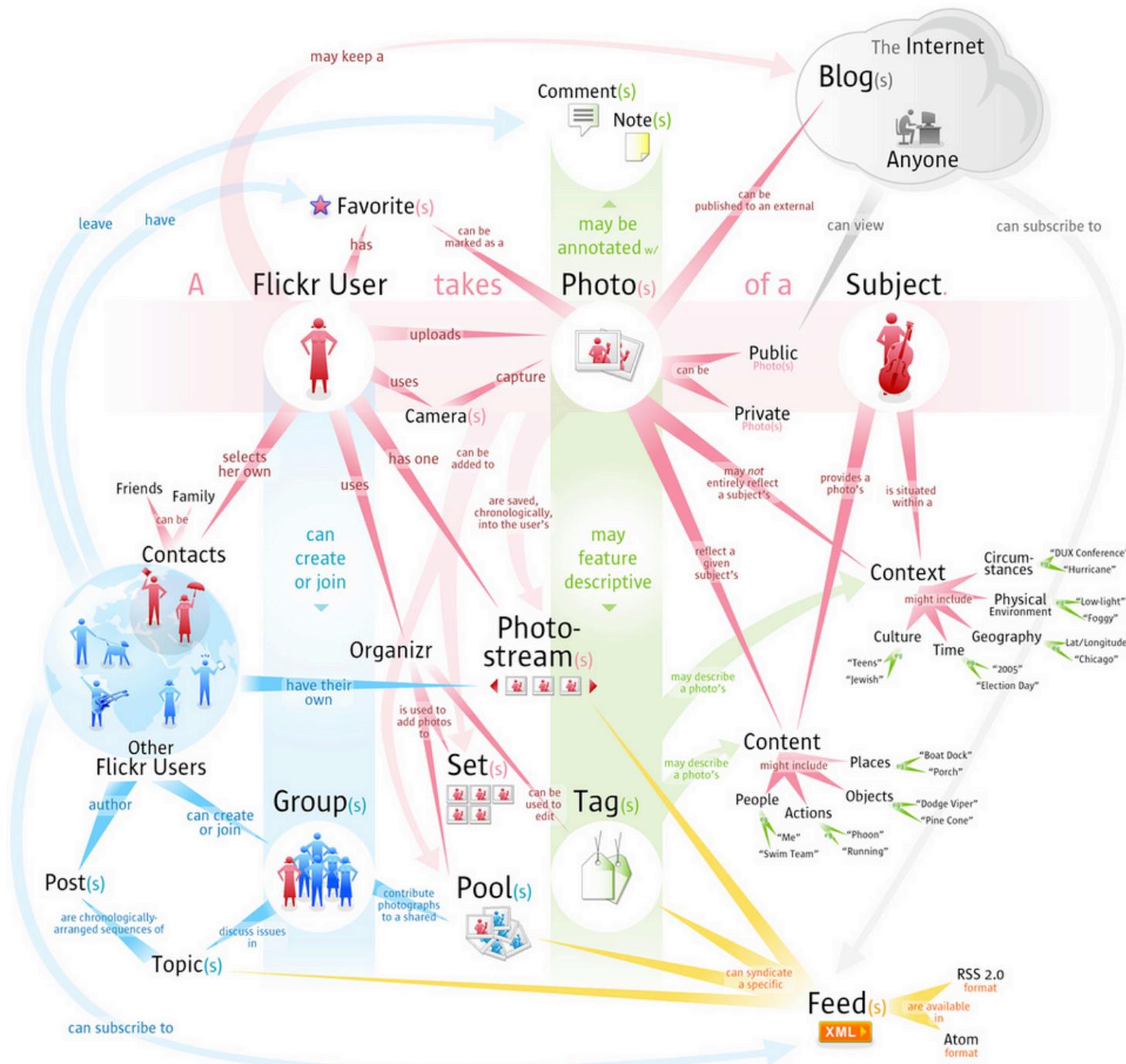
	Low	Med	High	
EMOTION	adventure independence security sensuality confidence power			
ERGONOMICS	comfort safety ease of use			
AESTHETICS	visual auditory tactile olfactory taste			
IDENTITY	point in time sense of place personality			
IMPACT	social environmental			
CORE TECH.	reliable enabling			
QUALITY	craftsmanship durability			
PROFIT IMPACT BRAND IMPACT EXTENDABLE				

## Circuit des parties prenantes



Analyse d'artefact par le circuit de croyances et prise d'habitude (semiotique pragmatique)  
<https://www.metabolisme.design>





# UX Design Methodology: Phase 2

## Creating Empathy

Researching your users to better understand their needs and creating empathy in your team:

- Personas
- Scenarios
- Bibles
- Visual Lifestyle References (aka Mood Board)
- Role Play or Performance



### TONYA CREW

"I learn by studying with other engineering students. I really need my group to get my coursework done and study for exams."

#### WHAT'S YOUR SCHOOL WORK LIKE?

Problem sets are pretty much my life as an engineering student! The problems are really challenging every week. Actually, this is the hardest semester for me ever. I usually work on the problem sets on my own and then I get together with my assigned group members. We have to turn in the homework together, handwritten on engineering paper. It's great because I always learn from talking about the problems with my group members. It's hard for us all to get together because everyone's so busy with their classes, work, and other activities. Our exams are really tough too. I don't know how I'd get by without meeting up with classmates to study together for exams.

In my CHE 450 course I have to do a group presentation with two other students. We divvied up the work since it was impossible for us to find many times when we could meet. But we put the presentation together and practiced the whole thing a few times in one of the EB 1 classrooms that was empty. It felt like we shouldn't be there though.

#### WHERE DO YOU STUDY?

I've got my routine down! My classes are mostly on Centennial Campus. I usually study in between classes in EB 1. I like studying there because it's close to my classes and my TA's office is there. I can get food and I

#### ABOUT ME

- 21 years old
- Senior, Chemical and Bio Engineering ("CHEM E")
- Hunt Library will be a great place for routinely meeting with my group for class projects.

#### MY NEEDS

- A room my group can be in weekly basis
- Big tables for spreading out our stuff
- A room for practicing presentations, one that has professional equipment
- A sense that I'm near other students
- Food and drink

#### WHAT'S IN MY BAG

- Calculator
- Engineering paper

## Kivio Users

	The researcher	The Sysadmin	The OSS developer	The CS student
Name	Alexander Weiß	Donald M. Berry	Kristian Larsson	Eric Neville
Age	30	30	26	24
Location	Germany	US	Sweden	France
Social Life	Alexander lives with his girl-friend in a flat in Hamburg.	Donald lives with his wife and 1-year old daughter in a house in Portland.	Kristian shares an apartment with two friends in Stockholm. His girl-friend lives in Uppsala. They see each other every weekend.	Eric lives with his parents in a small city close to Lyon. He visits the university there. Often, he stays at his friend's apartment for playing PC games and programming.
Work Life	He works at centre for environmental systems research and designs plans for replaceable energies in a EU-funded project.	He is a lead system administrator in a huge network solutions company in Portland.	A software developer with a dayjob in a medium-sized software company. Works on KDE in his spare time.	He is a student of computer science. Besides university, he performs small programming jobs for people in his neighbourhood.
Computer Experience	All are highly experienced with computers.			
Time at a computer per week	26-50 hours per week	35-50++ hours per week	30-50++ hours per week	25-45 hours per week
Computer tasks	Office tasks and Field-dependent. Also educational and recreational. No development.	Development and network administration. Does not use PC for office tasks, educational, and even recreational.	Mostly development and recreational. Also network administration and office.	Mostly development. Also educational, recreational, and network administration. Does not use for office work.
Relation to OSS.	He is not passionate about OSS.	He is a convinced user of OSS.	He is involved with OSS development.	He is a convinced user of OSS.
Requirements wrt diagramming	office requirements	highest claims	easy-going	eager beaver
Frequency of drawing diagrams	Each 2 <sup>nd</sup> month	Twice per month	Once a month	Each 2 <sup>nd</sup> month
Diagram main type	Flowcharts. Also visualising thoughts. No technical ones.	All, except sitemap	Visualising thoughts	Diagrams mostly UML
Size and complexity	15-20 elements, 2-3 levels, 3-7 shapes	15-30 elements, 2-5 levels, 4-9 shapes	15-20 elements, 2-3 levels, 3-7 shapes	15-20 elements, 2-3 levels, 3-7 shapes
Diagram purpose and context.	For non-IT job.	Diagrams are for the IT-Job, never for himself.	Diagrams are mostly for himself but, also for formally presenting.	For formally presenting in university. Not for himself, as work input or for any jobs
Current diagramming	Power Point or OOo.	Visio.	Pen and Paper.	Dia, Umbrello.



**Mike**  
25-34 single male  
living with friends

Mike works as a graphic designer in a small agency and one day wants to run his own agency.

He's got an iPhone and a Vodafone 360 H1 by Samsung phone, one personal and one for work. He follows friends and key people in the design industry via Twitter, blogs, and RSS feeds. He uses his iPhone for work emails and his H1 for Facebook.

He uses Twitter to post updates about what he's up to with his project work as well as using it as a tool to find out what people are up to and to invite them to events. He uses Facebook to share personal photos and video and keeps a Tumblr blog to post interesting things he discovers and share them with his friends and followers.

Techie



**Zoë**  
18-33 single female  
living with friends

Zoë is studying a Masters in International Development unsure of what the future lies ahead of her.

She is constantly using the Facebook app on her Vodafone 360 M1 by Samsung phone as well as on her PC to upload and tag photos and videos from places she's been to with her friends, as well as to find out and comment on who's been where at which club nights and parties.

She regularly texts and messages her friends to find out if they've heard about a new pop-up shop she heard about via a flyer, or one-off warehouse party started by friends of friends.

Socialite



**Geoff**  
35-49 married male  
with young kids

Geoff works as a senior architect in a large practice, and has a wife and a young girl and 6-month baby boy. He thinks the time is right to start looking for a bigger home for his family.

Geoff uses his Vodafone 360 H1 to take photos and videos of prospective sites he visits. He purchased the H1 because of its ability to check email, surf the web, use apps, and take photos and video.

He loves the built-in camera and also uses this phone on holiday to take snaps of the family as it fits in his pocket and doesn't want to carry a large SLR around with him. He likes to upload his photos and video to Flickr and share them with his family and friends. He also creates photo books from his holidays snaps to give as gifts to his parents.

Cost-conscious

### Confident learner



Picture credits –  
Nerdcoregirl, Flickr CC  
<http://www.flickr.com/photos/nerdcoregirl/>

## Samantha Bell

### "I'd love to keep in contact with my friends"

Sam is about to go abroad for her gap year, so her parents decided to get her a new camera, to make sure she's able to record everything she gets up to.

She likes the camera as it looks so modern, and it's able to do so much more than a lot of her friends' cameras.

She loves being in contact with people all the time, and finds it's a great way to kill time like when waiting for the bus. She uses a lot of the more advanced features – panoramic shots, online upload and .

When she encounters a problem she ignores it most of the time - she's not sure if she even got a manual with the camera. When she has trouble she can't ignore she speaks to her friends, or goes into a camera store – she wants to be talked through the problem.

### Ideal features

- Ability to take pictures
- Ability to upload images to personal site using 3G/Wifi
- Allowing others to access her pictures remotely
- Long battery life
- Ability to name and add comments to uploaded images
- Ability to create several albums, and upload pictures to each

### Frustrations

- Lack of wireless/3G access
- Slow uploads
- Low battery life
- Need to be plugged in to upload images
- Slow shutter speed
- Want to be able to name/add comments to uploaded images
- Getting online is confusing
- Creating new albums

### First time user

Female, 27 year old, single

Student

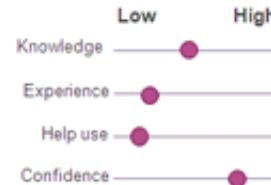
Sam prefers to learn how to things by trying things out by herself. She isn't worried about 'breaking' anything. If she does need help she would prefer to not to refer to a manual but "do it herself".

### Needs

In order of preference:

1. To share pictures with her parents
2. To share her pictures with her friends
3. To share her pictures with people she meets whilst travelling

### Key attributes





## Timothy Powell

P. Eng, Civil Engineer  
GeoLine Engineering  
Age: 52

*"Speed trumps security when it comes to exchanging documents. It's not worth jumping through hoops to protect a document that nobody's interested in but me and the client."*

Sends 12 documents/week at nearly 100 MB each [via FTP](#)

Sends 8 documents/week under 5 MB each [via email](#)

Receives 15 documents/week under 5 MB each [via email](#)

Receives 15 hand-edited CAD drawings/week [via fax](#)

Exchanges primarily PDF and Microsoft Word files

Employs couriers only for shipping physical goods

Internet use is mostly limited to a website that hosts discussion groups for civil engineers. Purchases flights, hotels, and conference registrations twice per year.

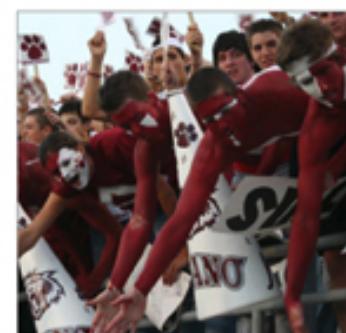
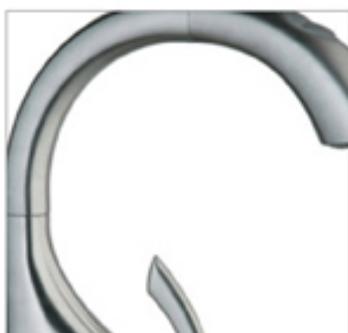
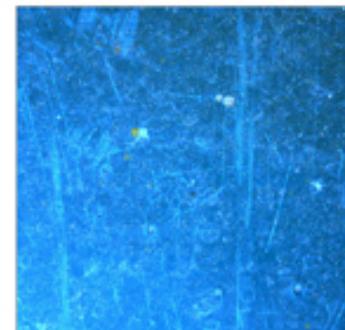
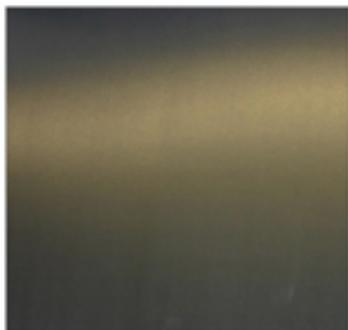
**Goal: Get everything done before heading home.** Timothy has a lot of work to stay on top of and firm deadlines that cannot be missed. Speed is a competitive advantage for GeoLine, so it's essential that delays do not occur. Timothy hates working at night, too, so he makes the most of his hours at the office.

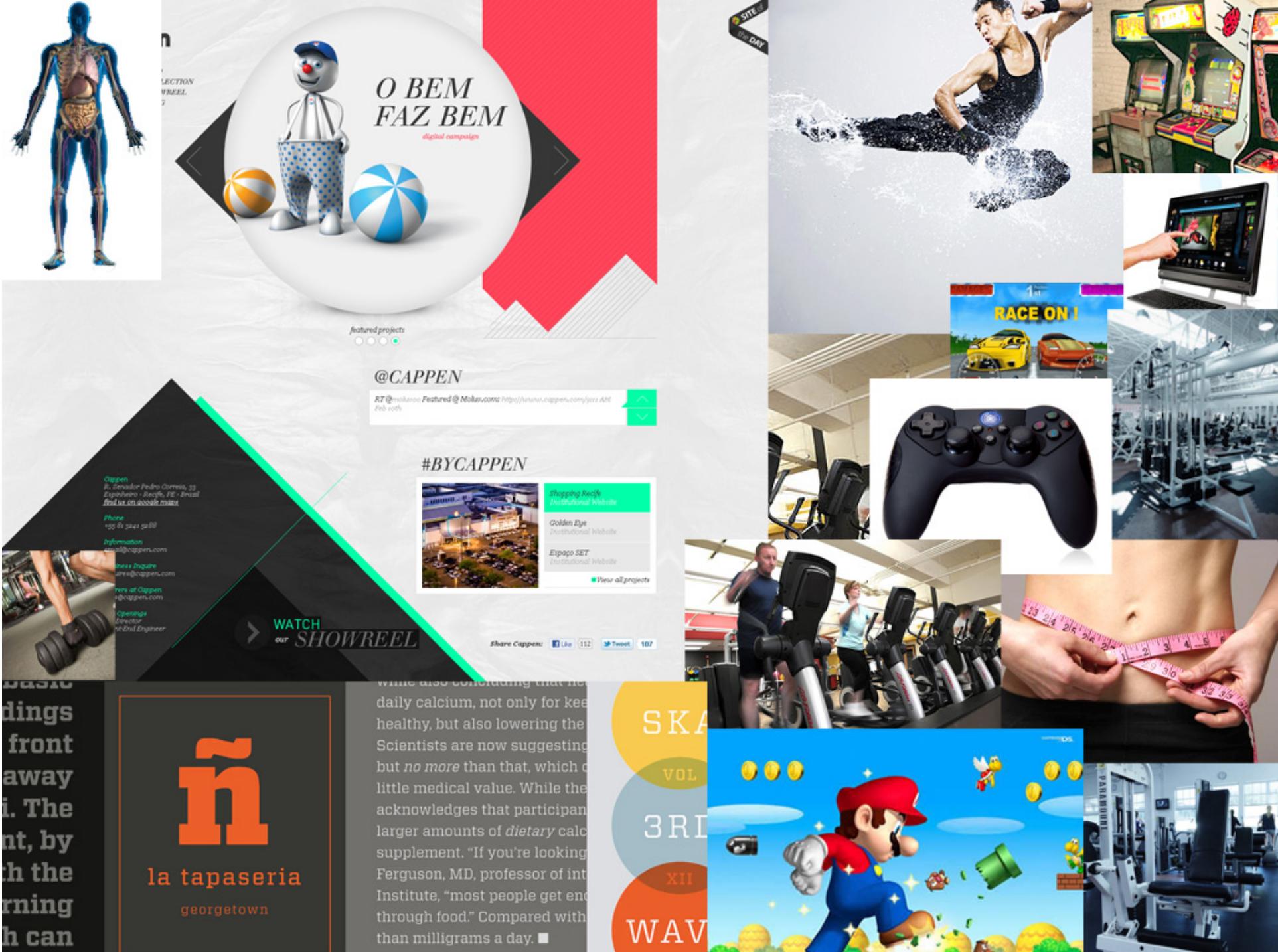
**Goal: Cover his back and avoid blame.** In Timothy's industry, projects usually go far over budget and are completed late, at which point all the subcontractors involved begin pointing fingers at each other. Timothy needs detailed records that prove he completed exactly what was expected of him and his company.

Timothy Powell is famous among his coworkers for once visiting a construction site and remarking to the client, "Look, you may build bridges, but I design them. And that's the most critical part!" He may not have made a friend that day, but Timothy was unconcerned. He doesn't suffer fools, just as he won't put up with anything that stands in the way of getting his job done. Timothy's work is extremely deadline-driven. His clients demand aggressive schedules and expect him to stick to them, as timing is crucial when coordinating subcontractors and suppliers on a large construction project.

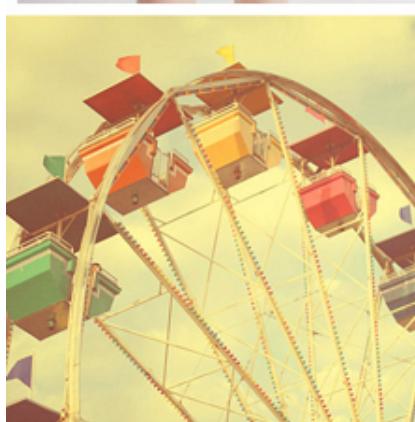
"On a great day, I'm able to get everything out the door and into our client's hands. Never, ever let anything come between you and that door!" Timothy struggles with this all the time. With at least three major projects underway, it takes an enormous effort to produce his CAD drawings on schedule. As a result, he ships most of his documents at the end of the day, just before leaving the office around 5:30 pm.

**CLICKDOX**













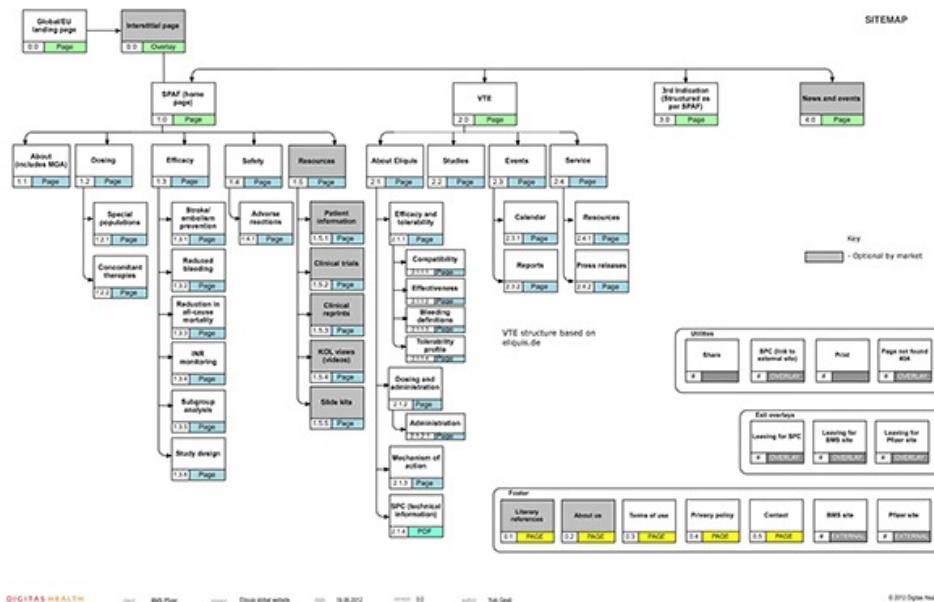
# UX Design Methodology: Phase 3

## Iterative Prototyping and Testing

Programming begins at this phase, using place holders, dummy text, etc. to code and test basic functionality. In parallel, phase 3 entails on the design side defining:

- 1. Information Architecture                                  *Structure*
  - 2. Wireframing    *Functionality*
  - 3. Art Direction    *Design*  
(UX designers are usually not responsible for AD since it has links to the brand identity and is generally done by graphic designers)
  - 4. This is then handed off for the UI creation (Front End)  
  - Prototypes are then created and tested using quantifiable measurements and compared using small number statistics like the student's T-Test.  
Design recommendations are extracted to be implemented in the next cycle.
  - Test fast and test often, 8-10 users is acceptable.
  - As the product gets nears delivery or beta testing 15-30 testers is ideal.

See: <https://cdtpca.wordpress.com/category/design-research/> (pwd: drm)  
[Student's T-Test, by Daniel Formosa](#) (pwd: drm)



DIGITAS HEALTH Client BMS Project Eliquis global website Date 18.06.2012 Version 00 Author Yael Gafit © 2012 Digitas Health

**WIREFRAME**

Secondary navigation appears as dropdown on mouseover of primary navigation.

**WIREFRAME**

Annotations:

- ① Visual change to clicked area on primary navigation.
- ② SPC SPC to appear on every (SPC) page (except news area) - in high visibility.
- ③ Other indications will display appropriate SPC.
- ④ Static graphical image.
- ⑤ Links to additional graphical 'slides' within sub-level.
- ⑥ Add related content.
- ⑦ Links to relevant areas of site.
- ⑧ Literary references

Footer links: About us, Terms of use, Privacy policy, Contact.

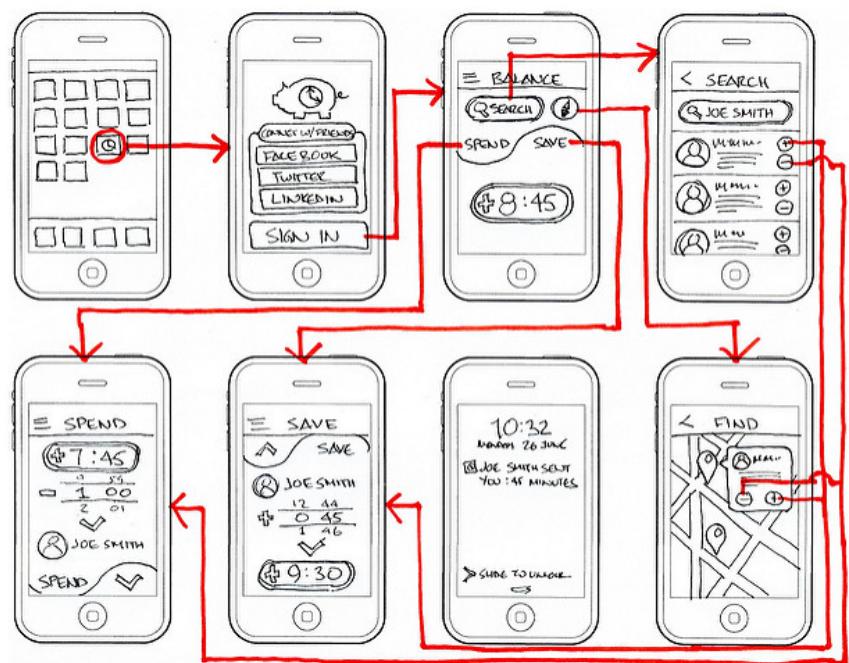
© 2012 Digitas Health

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- ⑮ Links to relevant areas of site.
- ⑯ Literary references

Footer links: About us, Terms of use, Privacy policy, Contact.



# UX Design References

**Importance of Experience Design, Keynote:**  
**Tedde Van Gelderen**  
<http://youtu.be/oRvyMxI9cgo>

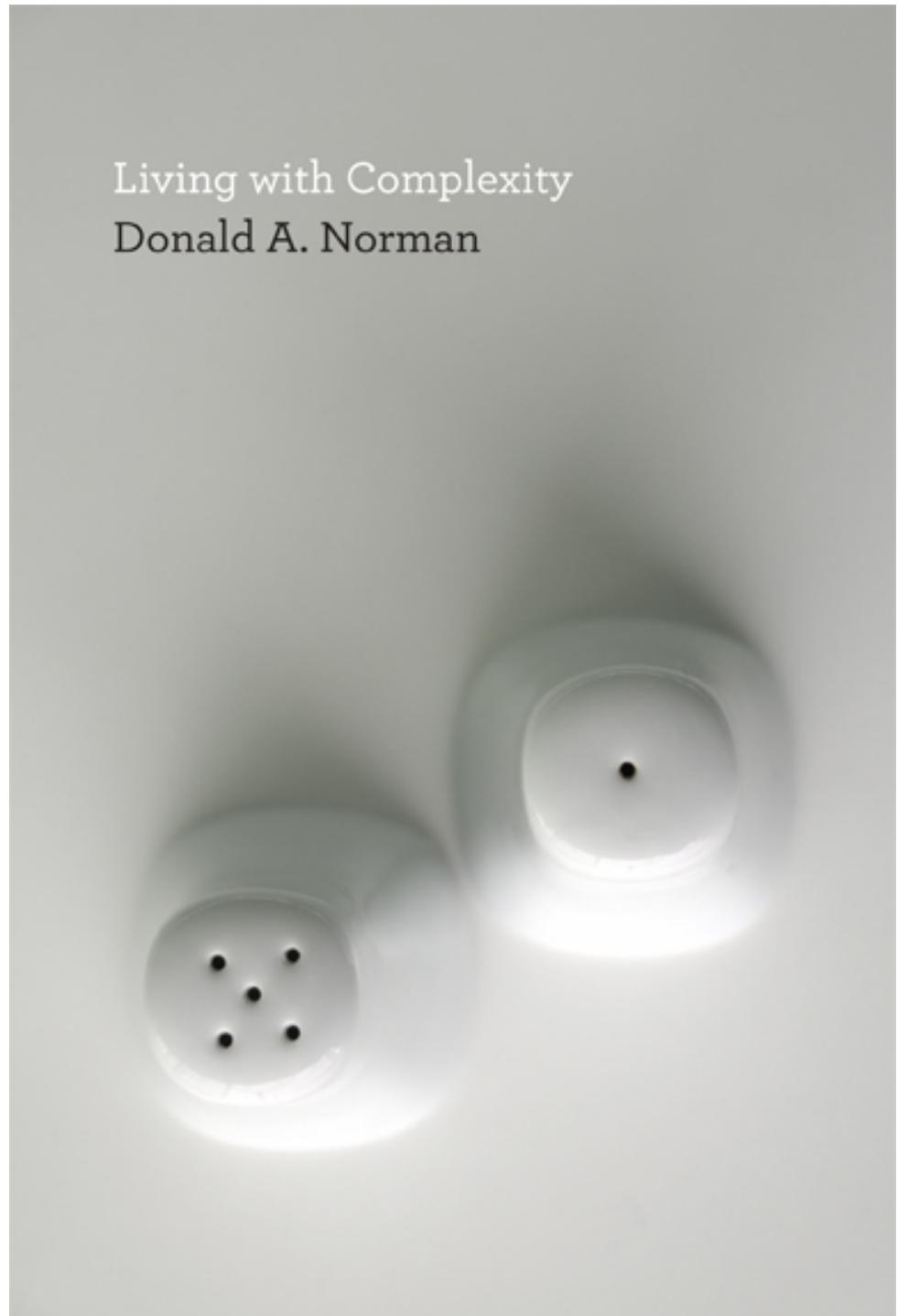
**10 Usability Heuristics**  
<http://youtu.be/hWc0Fd2AS3s>

**User Experience Design in the Google Era**  
<http://youtu.be/qbToDF1M7j0>

<http://www.designinginteractions.com/interviews/DunneandRaby>  
<http://www.designinginteractions.com/interviews/BillGaver>

**UX/UI MOOCs**  
[Intro to Design of Everyday THings | Udacity](#)  
[Mobile Design and Usability for iOS | Udacity](#)

Living with Complexity  
Donald A. Norman

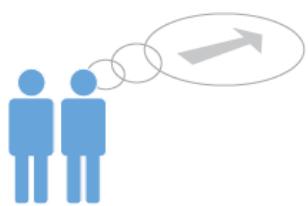


# Other UX Design Tools

- Touchpoints
- Location Planners
- Location Maps
- Service Blueprints

# SERVICE DESIGN PROCESS AND TOOLS

## VISION



*Values, philosophy and goals to provide direction and guide decision-making*

## PERSONAS



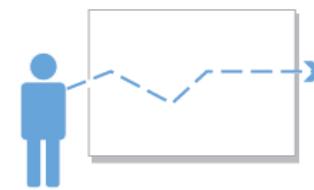
*Representative users based on research into motivations and behaviors*

## LOCATION PLAN



*Determining what services are offered where, when, and by whom*

## JOURNEY MAP

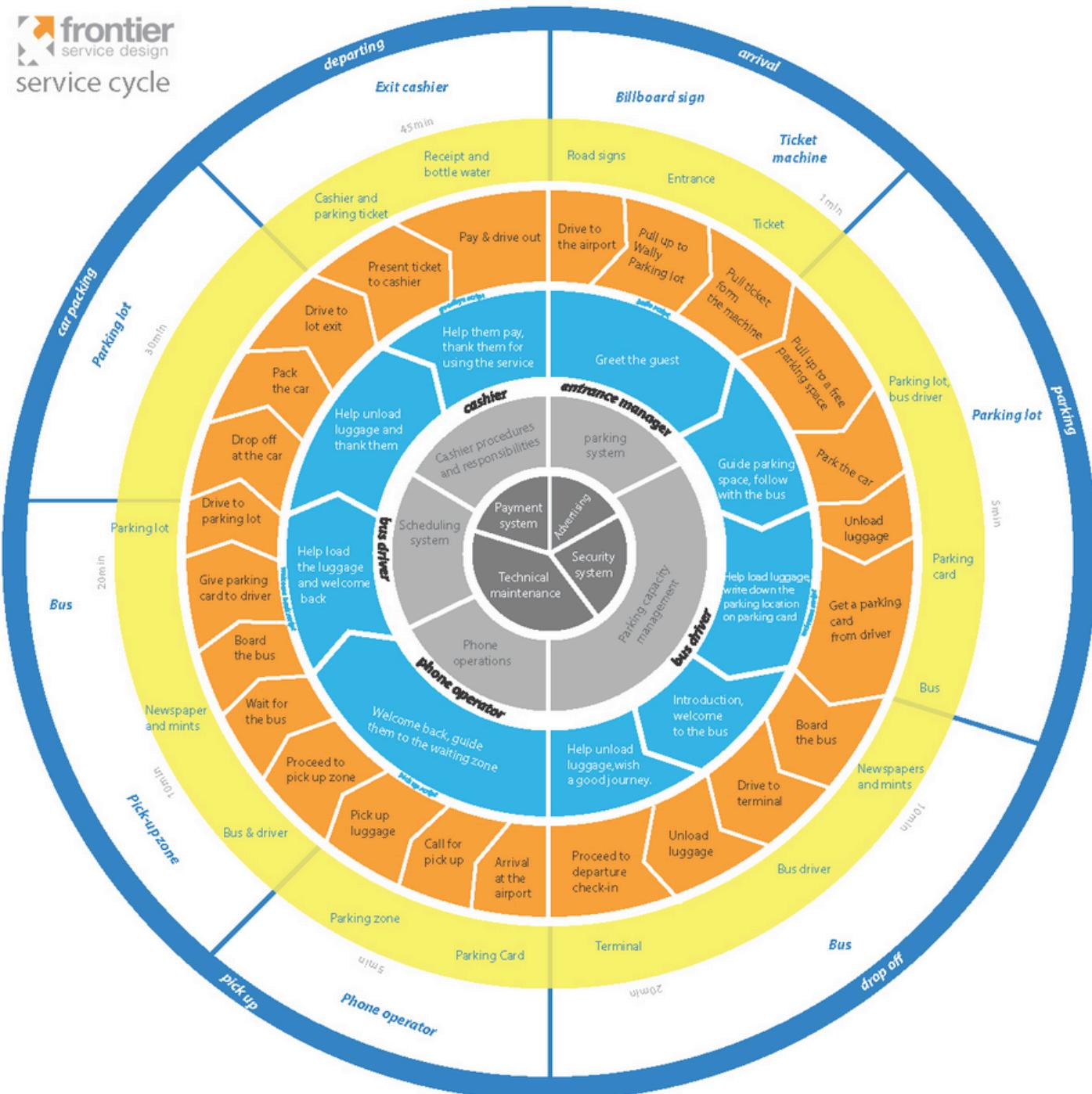


*Mapping service use over time, identifying the touchpoints in the user experience*

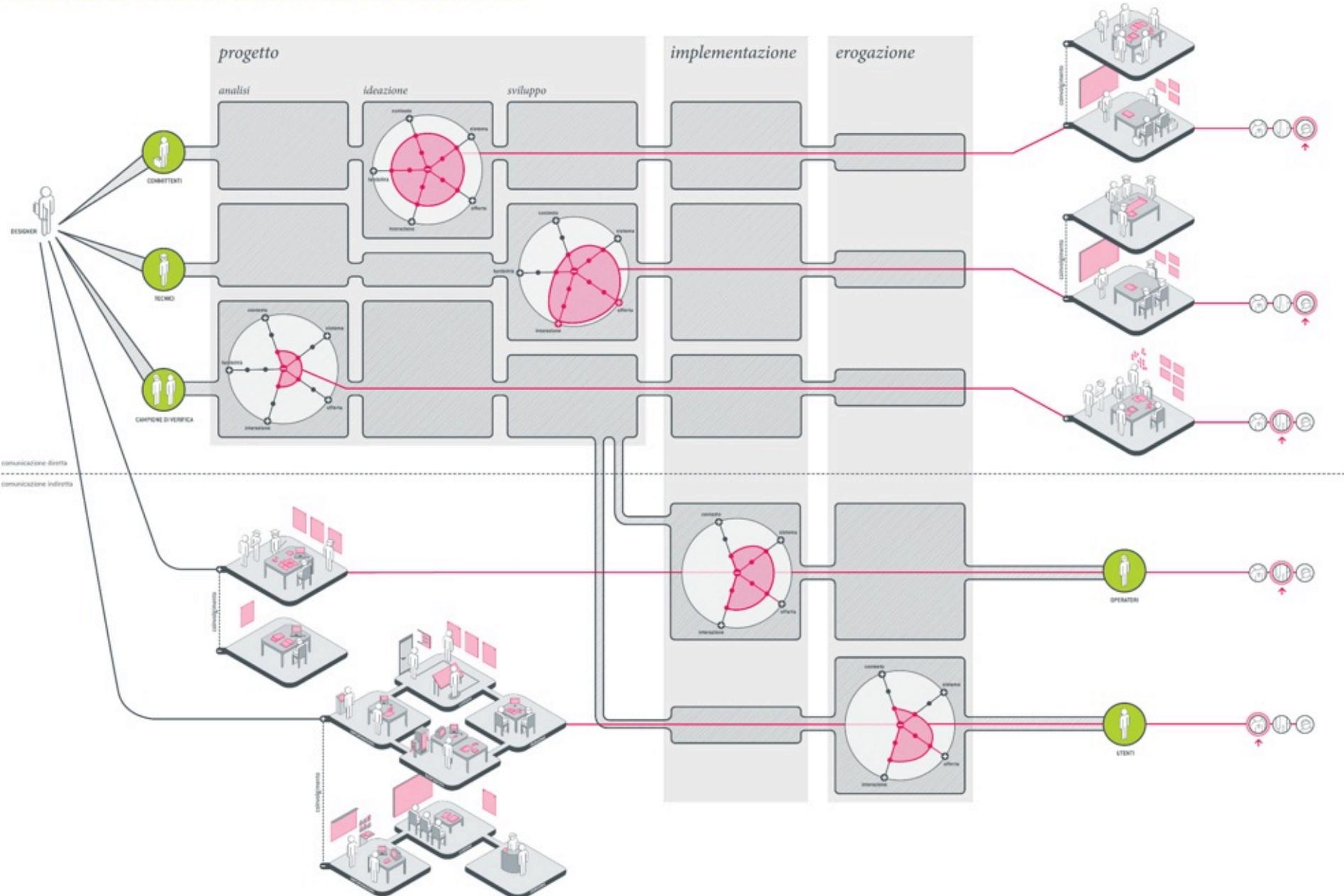
## BLUEPRINT



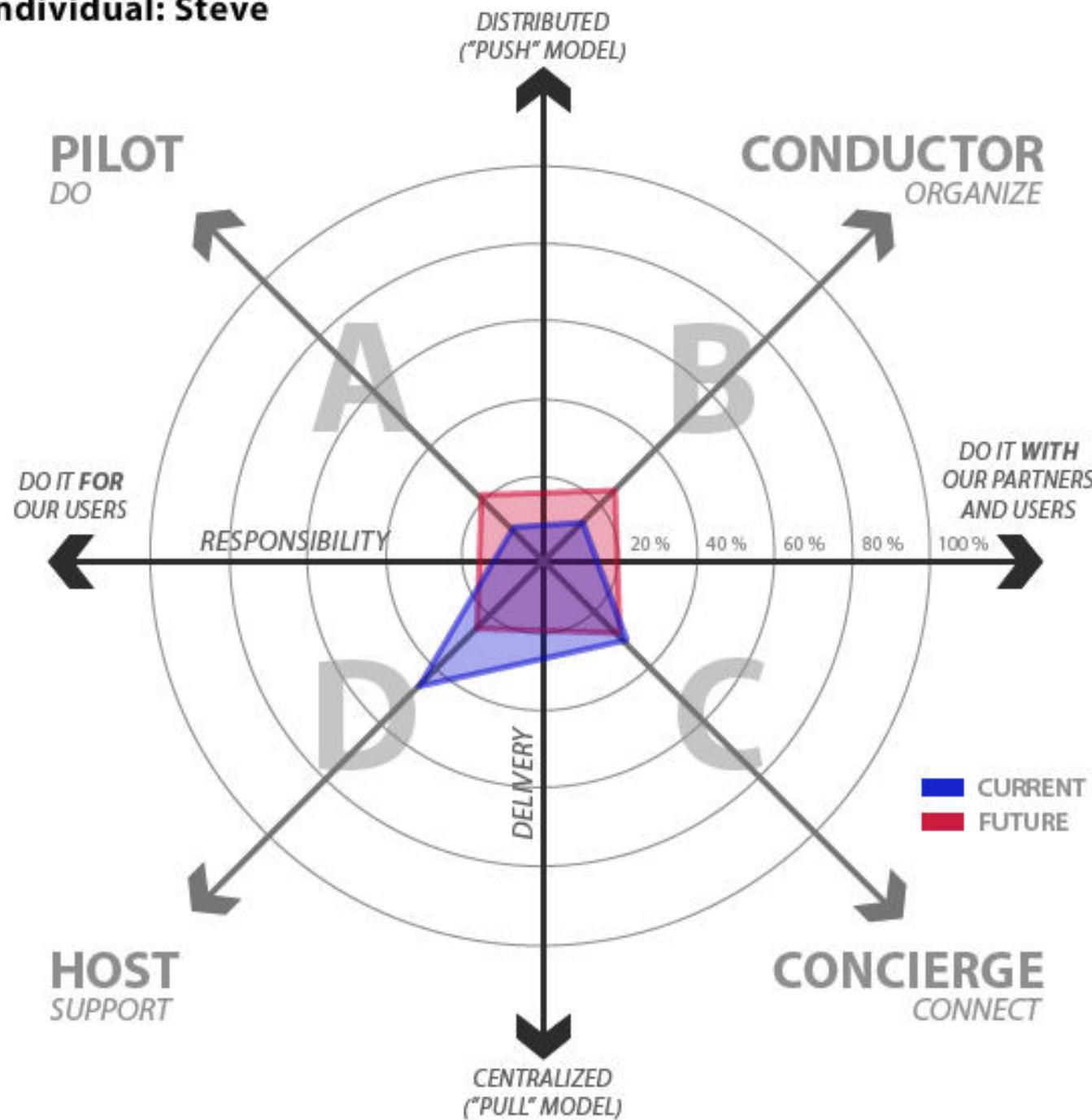
*Guidance on delivery of a service across different channels for staff and systems*



## LA COMUNICAZIONE NEL DESIGN DEI SERVIZI



## Individual: Steve



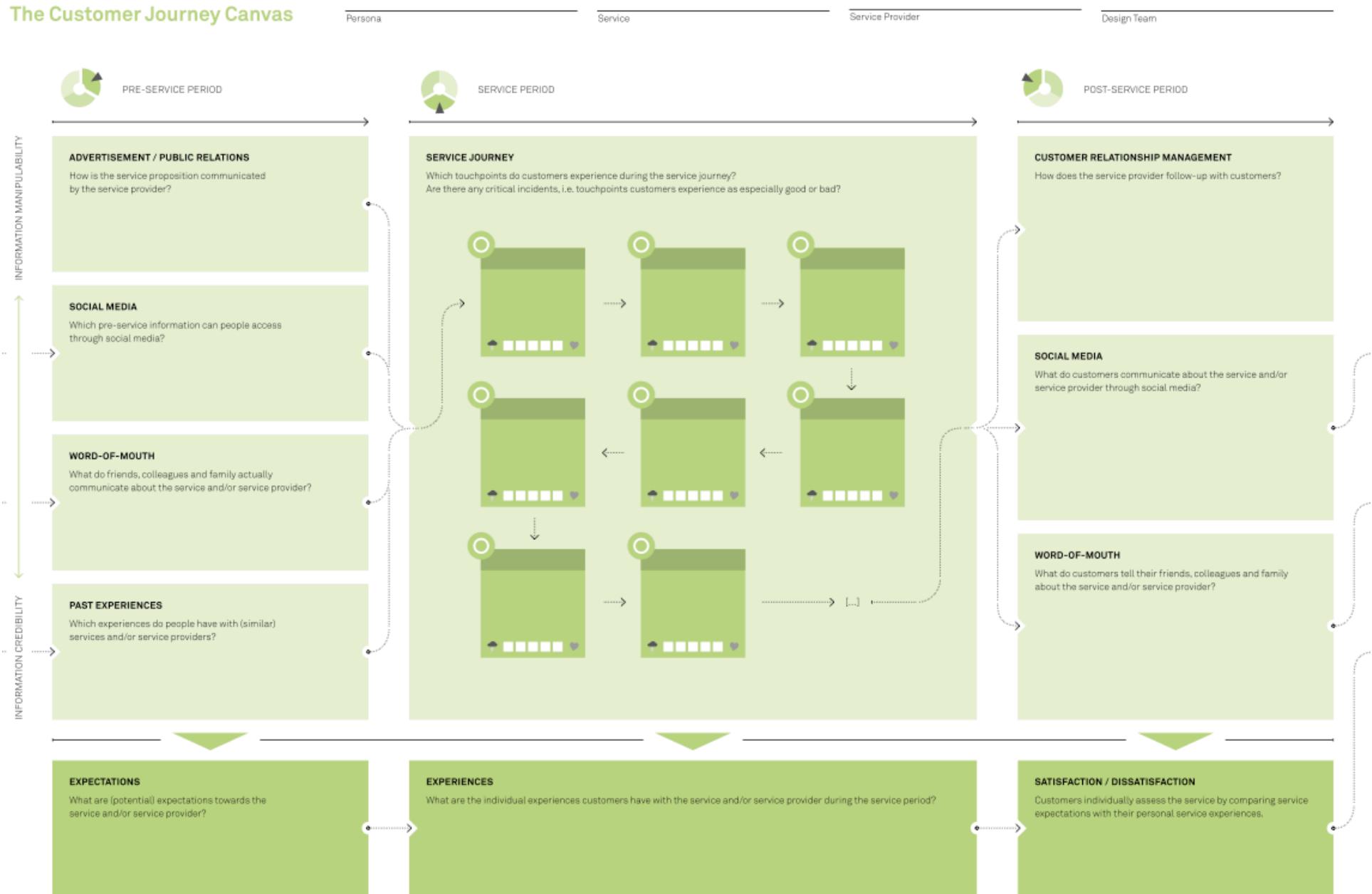
# Service Location Planner

## Legend

Offered 9 to 5
Offered 24/5
Offered all lib
Offered on de

Services	Integrated Service Point/Lrng Commons 1	Scholar's Commons	Quiet Reading Room	Curriculum Library	Creativity / Media Zone	Reference and Info Literacy	Other
Ask Us! (Virtual Reference Center)							
Assistance with hardware - library's device	X			X	X		
Assistance with network access - patron's device	X						
Assistance with printing and copying	X			X			
Assistance with scanning	X					X	
Assistance with scholarly publishing		X					
Assistance with University-related questions	X						
Assistance with use of technology sandbox					X		
Check out devices	X					X	
Check out group study room resources	X	X		X			

# The Customer Journey Canvas



Concept and design: Marc Stadelmann & Jakob Schneider — Inspired by the Business Model Canvas — [www.thisisservicedesignthinking.com](http://www.thisisservicedesignthinking.com)  
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<http://creativecommons.org/licenses/by-sa/3.0/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94108, USA.



## Journey Map: *getting printing help in commons*

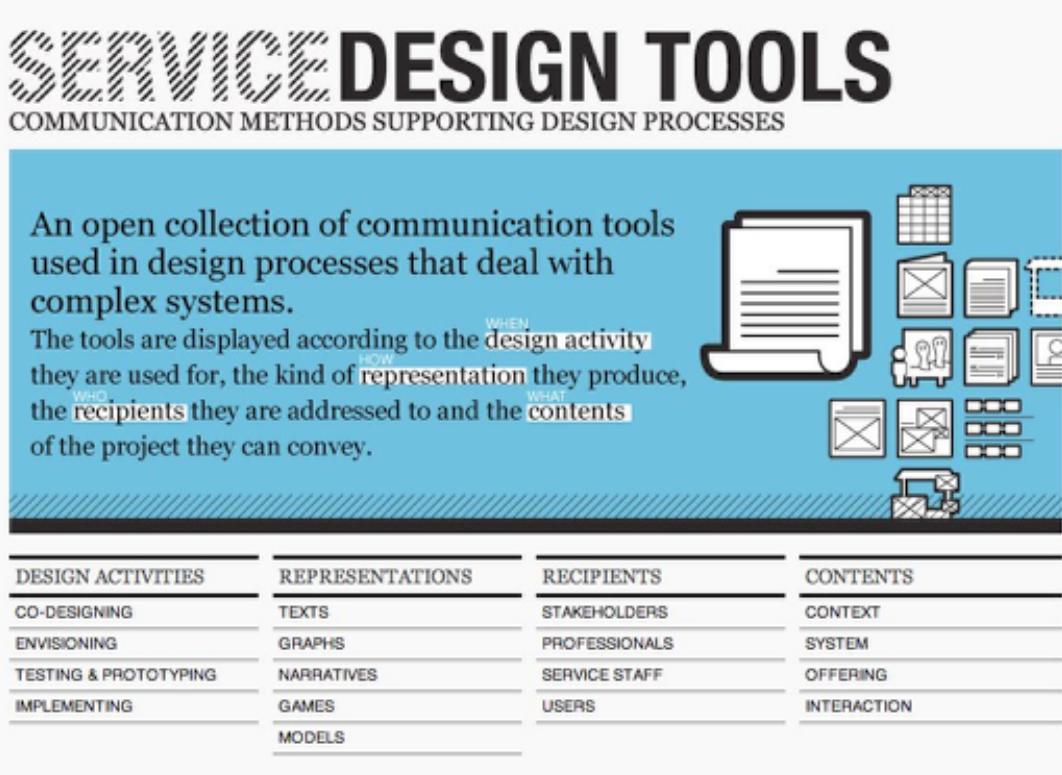
	Pre-Service	Enter 11:30am	Walking, 11:45am	Eating 11:50am	Working 12:00pm
<b>Activities</b>	Leave class with 3 hours before next class. Need work on Checks what sandwiches are on sale at Hunt Café.	Enter library and head to café. Checks computer availability which shows 3 <sup>rd</sup> floor Learning Commons not too busy.	Travel to 3 <sup>rd</sup> floor Learning Commons	Sit on steps to eat sandwich.	Finds computer, settles in.
<b>Environment</b>	EB 1	Café area, 1 <sup>st</sup> floor.	Entry, walking past ISP	Steps to LC	LC area near window.
<b>Interaction</b>	Checks phone. Walks down to Hunt.	Gets drink and sandwich from café. Watches ABSOS.	Hands are full, has to get ID out to swipe? Greeted by staff member.	Clean steps look inviting.	Logs in to campus image. F files in dropbox. Edits prev work.
<b>Objects</b>	Phone. Bag w/laptop.	Displays at café show booked rooms and computer availability. Food, drink.	Carrying bag and food.	Food, bag, trash can.	Desktop computer Desk area, chair,
<b>Users</b>	Patron.	Campus dining, patron.	Staff Patron.	Patron.	Patron

# Service Blueprint: *conferencing and collaboration*

	Web/Kiosk	Service Point/Call Center	Presentation Spaces	Groups
<b>Physical Evidence or Communication Channels</b>	<ul style="list-style-type: none"> <li>• Web site and online scheduling system</li> <li>• Physical kiosk touch screens with reservation system</li> </ul>	<ul style="list-style-type: none"> <li>• Service people</li> <li>• Bookable equipment for checkout</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Immersion Theater, Gaming, Presentation Practice rooms</li> <li>• Mobile video cart</li> <li>• Call buttons in spaces for reporting problems / asking for help</li> </ul>	<ul style="list-style-type: none"> <li>• Small, group</li> <li>• Light conferencing</li> <li>• Software</li> </ul>
<b>Customer Actions (see journey map)</b>	<ul style="list-style-type: none"> <li>• View options for conferencing</li> <li>• View/participate in live or recorded content</li> <li>• Schedule a room and conferencing technology, request video cart/equipment</li> <li>• View schedule of activities</li> </ul>	<ul style="list-style-type: none"> <li>• Assistance with booking room or choosing technology</li> <li>• Checkout auxiliary equipment</li> <li>• Wayfinding</li> <li>• Get assistance with conferencing problems</li> </ul>	<ul style="list-style-type: none"> <li>• Capture a presentation, conference, or event, save to personal device or personal space</li> <li>• Broadcast to overflow space within library</li> <li>• Broadcast web stream to remote participants</li> <li>• Request mobile cart for video conference</li> </ul>	<ul style="list-style-type: none"> <li>• Start small (eg. SIT)</li> <li>• Start up collaboration session</li> <li>• Start conference</li> <li>• Cloud collaboration</li> <li>• Share large files</li> </ul>
<b>Front-line Staff Actions (Public services)</b>	<ul style="list-style-type: none"> <li>• Respond to requests for cart/equipment and take it to room</li> <li>• Respond to help requests and setup requests</li> <li>• Schedule assistance for users doing conference &amp; collaboration</li> <li>• Maintain marketing &amp; outreach related to collaboration</li> </ul>	<ul style="list-style-type: none"> <li>• Assist with booking issues</li> <li>• Manage tickets from scheduling system for setup &amp; breakdown of activities</li> <li>• Tier I troubleshooting of connection issues</li> <li>• Check out auxiliary tech items /carts</li> </ul>	<ul style="list-style-type: none"> <li>• Assist with booking issues</li> <li>• Respond to tickets from scheduling system for setup &amp; breakdown of activities</li> <li>• Tier I troubleshooting of connection issues</li> <li>• Deliver auxiliary tech items /carts</li> </ul>	<ul style="list-style-type: none"> <li>• Assist</li> <li>• Respond</li> <li>• schedule</li> <li>• setup</li> <li>• activities</li> <li>• Tier II</li> <li>• connect</li> <li>• Deliver</li> <li>• items</li> </ul>

## More information on tools & methods

- <http://www.servicedesigntools.org/>
- <http://www.servicedesignresearch.com/>
- <http://www.service-design-network.org/>
- <http://learningspacetoolkit.org/services-and-support/service-design-process/>
- <http://emergentbydesign.com/2012/10/25/21-card-decks-creative-problem-solving-effective-communication-strategic-foresight/>



The image shows a screenshot of the Service Design Tools website. The header features the text "SERVICE DESIGN TOOLS" in large, bold, black letters, with "COMMUNICATION METHODS SUPPORTING DESIGN PROCESSES" in smaller text below it. To the right of the text is a blue background area containing icons representing various communication tools like documents, graphs, and user interface wireframes. Below this is a table with four columns: DESIGN ACTIVITIES, REPRESENTATIONS, RECIPIENTS, and CONTENTS. The table lists specific tools under each category.

DESIGN ACTIVITIES	REPRESENTATIONS	RECIPIENTS	CONTENTS
CO-DESIGNING	TEXTS	STAKEHOLDERS	CONTEXT
ENVISIONING	GRAPHS	PROFESSIONALS	SYSTEM
TESTING & PROTOTYPING	NARRATIVES	SERVICE STAFF	OFFERING
IMPLEMENTING	GAMES	USERS	INTERACTION
	MODELS		