



Mapping complexity

Ewout Nijman

Principal Interaction Design

WeAreReasonablePeople



Who ever felt lost in complexity?



'Looking for trouble'

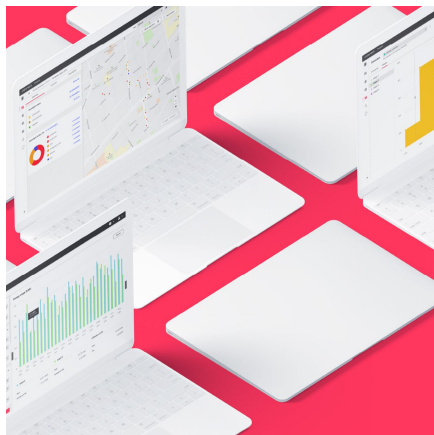
Philips MR Workspace

Philips UI with highest complexity: safely multitasking while performing MRI scans.



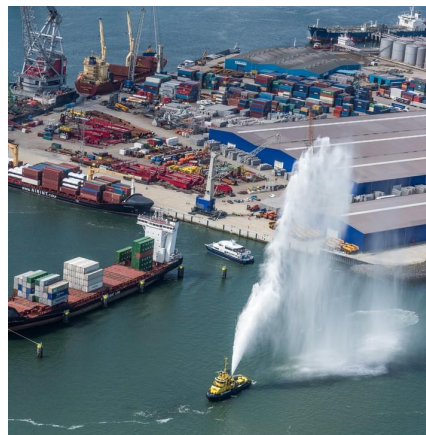
Signify Interact City

Controlling millions of city lights and sensors from a single dashboard



Rhenus Port Call

One app to replace all digital and paper workflows for an entire breakbulk terminal



Lightyear One

Dashboard for the 'Dutch Tesla' that charges itself with solar panels in the roof



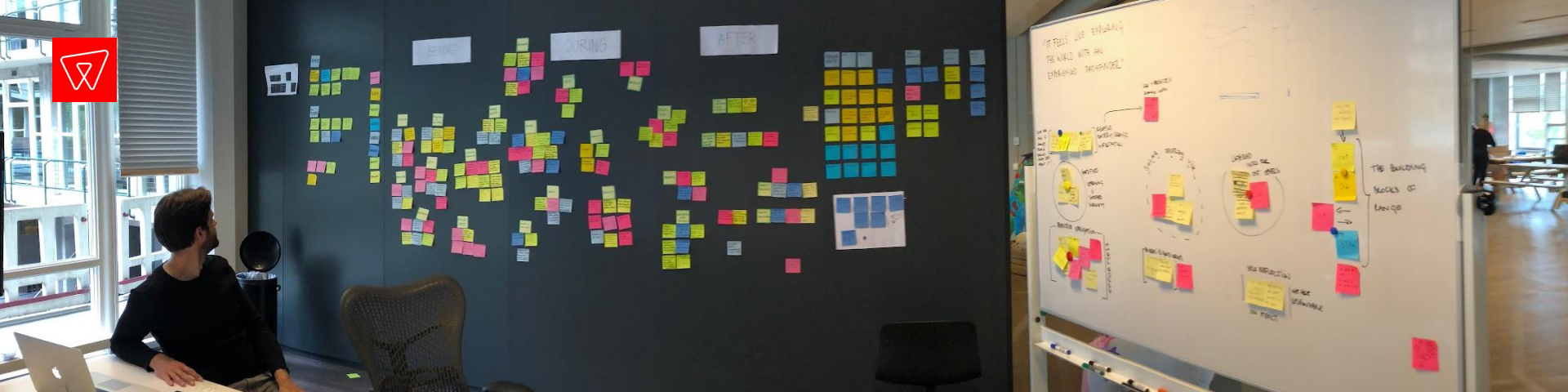


When complexity runs out of control

- 3 touchpoints
- > 100 features per touchpoint
- > 20 relevant properties per feature
- > 6000 things to discuss
- > 20 stakeholders
- Every disciplines in its own universe trying to contain the chaos

Meetings that took up to 8 hours!

Validation for existence						User			Architecture				
Group	Component	Phase	Need source	Need definition	Validated	Type	Touchpoints	Position	Visual priority	Attention value	Display	Size	
Applications	Navigation	MVP	User need	-	Yes	Noice	IC / IV / Mobile	Content	-	high	Optional	XL	
	Calendar	-	User need	-	No	Noice	IV / mobile	Content	-	low	Optional	XL	
	Media center	-	User need	-	No	Noice	IC / IV / Mobile	Content	-	low	Optional	XL	
	Message center	-	User need	-	No	Noice	IC / IV / Mobile	Content	-	-	-	-	
HVAC	Phone	-	User need	-	No	Noice	IC / IV / Mobile	Content	-	mid	Temporary when incoming, optional when outgoing	M	
	Chair heating	MVP	Tech	-	-	Noice	IV / mobile	Content / Bottom	-	mid	Persistent	S	
	Climate zones	MVP	Tech	-	-	Noice	IV / mobile	Content	-	low	-	L	
	Air conditioning	MVP	Tech	-	-	Noice	IV / mobile	Content / Bottom	-	mid	Persistent	S	
Menu	User profiles	-	UI	-	-	Intermediate	IV / mobile	Menu	-	mid	-	-	
	Language & units	-	User need	-	No	Noice	IV / mobile	Content	-	-	Optional	-	
	Owner manual	-	User need	-	No	Noice	IV / mobile	Content	-	-	-	-	
	Reset	-	User need	-	No	Intermediate	IV / mobile	Content	-	-	-	-	
Security	Day / Night mode (sensors)	-	User need	-	No	Noice	IC / IV / Mobile	Content	-	-	-	-	
	Airbags	MVP	-	-	-	-	-	-	-	-	-	-	
	Screen brightness	MVP	1	-	-	-	-	-	-	-	-	-	
	Emergency power off	MVP	2	-	-	-	-	-	-	-	-	-	
Other	Energy saving modes	MVP	3	Car status	-	-	-	-	-	-	-	-	
	Exterior light settings	MVP	4	Exterior lights	MVP	Tech	-	Yes	-	Noice	IC	-	
				Turn signals	MVP	Tech	-	Yes	-	Noice	IC	-	
				Transmission modes (PRND)	MVP	Safety	-	No	-	Noice	IC	-	
	Lock / unlock doors			Doors & hatch	MVP	Tech	-	Yes	-	Noice	IC / IV / Mobile	-	
	Display clean mode			Traction control		Tech	-	Yes	-	Noice	IC / IV / Mobile	-	
				Renerative braking		Tech	-	Yes	-	Noice	IC / Mobile	-	
				Steering mode		Tech	-	Yes	-	Noice	IC / Mobile	-	
				Brake brake / hand brake	MVP	9	Brake system	MVP	Tech	-	Yes	-	-
				Charge limit						Noice	IC	-	
				Charge current amperage						Noice	IC / IV	-	
				Scheduled charging						Noice	IC / IV	-	
				Open charge port						Noice	Hardware	-	
				Time, date, timezone						Intermediate	-	-	
			Volume control	MVP	13	Screenwash	MVP	Tech	-	Yes	-	-	
			Time	MVP	14	Maintenance	-	Tech	-	Yes	-	-	
			Bluetooth indicator	MVP	15	Car performance				Noice	IC / IV / Mobile	-	
			LTE indicator	MVP	16	Speed	MVP	Tech	-	Yes	-	-	
			Park assist			Charge status	MVP	Tech	-	Yes	-	-	
			Doors locked indicator			Range status	MVP	User need	-	Yes	-	-	
			Tip overview			Average consumption/km		User need	-	Yes	-	-	
			Startup			Trip counter		User need	-	Yes	-	-	
			Onboarding			Average consumption/trip		User need	-	Yes	-	-	
						Odometer		User need	-	Yes	-	-	
						Road signs		User need	-	No	-	-	
						Collision detection		User need	-	No	-	-	
						Sun position		User need	-	No	-	-	
						Date	MVP	User need	-	No	-	-	
						Time	MVP	User need	-	No	-	-	
						Outside temperature	MVP	User need	-	No	-	-	
						Navigation		User need	-	Yes	-	-	
						Music		User need	-	No	-	-	
						Call		User need	-	No	-	-	
						Volume		User need	-	No	-	-	
						Startup		User need	-	No	-	-	
						Onboarding		User need	-	No	-	-	



Parallel Universes

GitHub Kanban board Workflows Roadmaps Prototypes
UML Diagrams Wireflows Personas Requirements Notion
Scenarios Jira Customer journeys Blueprints Stakeholder maps
Confluence



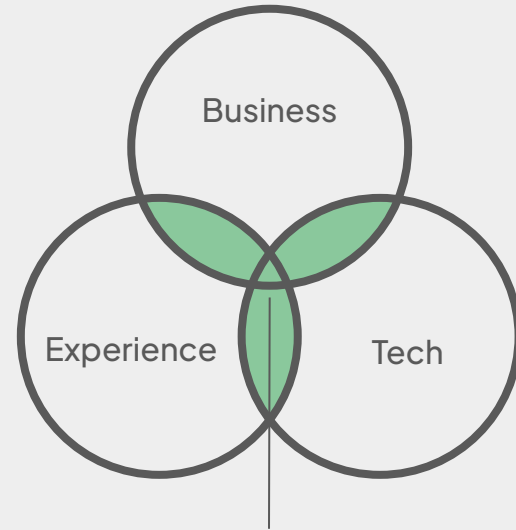
Creating a better map



1. Search for a better Boundary Object*

*A shared artifact, tool, or concept that facilitates communication and understanding across different teams or stakeholders, allowing them to collaborate effectively despite having varying perspectives, roles, or goals.

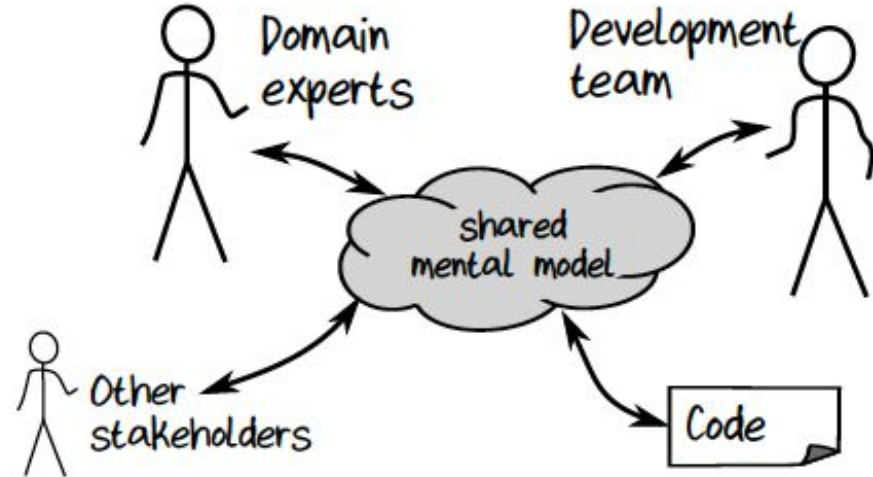
Boundary Objects in our context



Sprint boards, Prototypes, Personas, Blueprints, Customer Journeys, Experience maps, UML diagrams, Wikis, Scenarios, Sketches, Storyboards

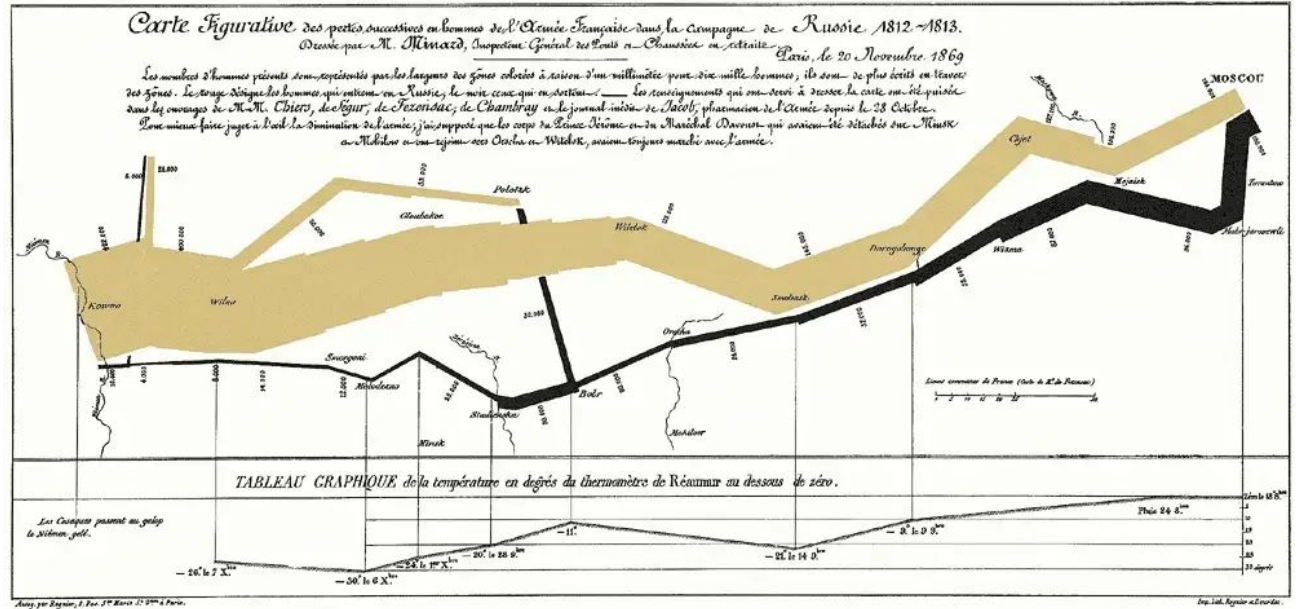


2. Express shared mental models





3. New types of diagrams



'Greatest ever infographic' - Charles Minard's Infographic of Napoleon's Invasion of Russia



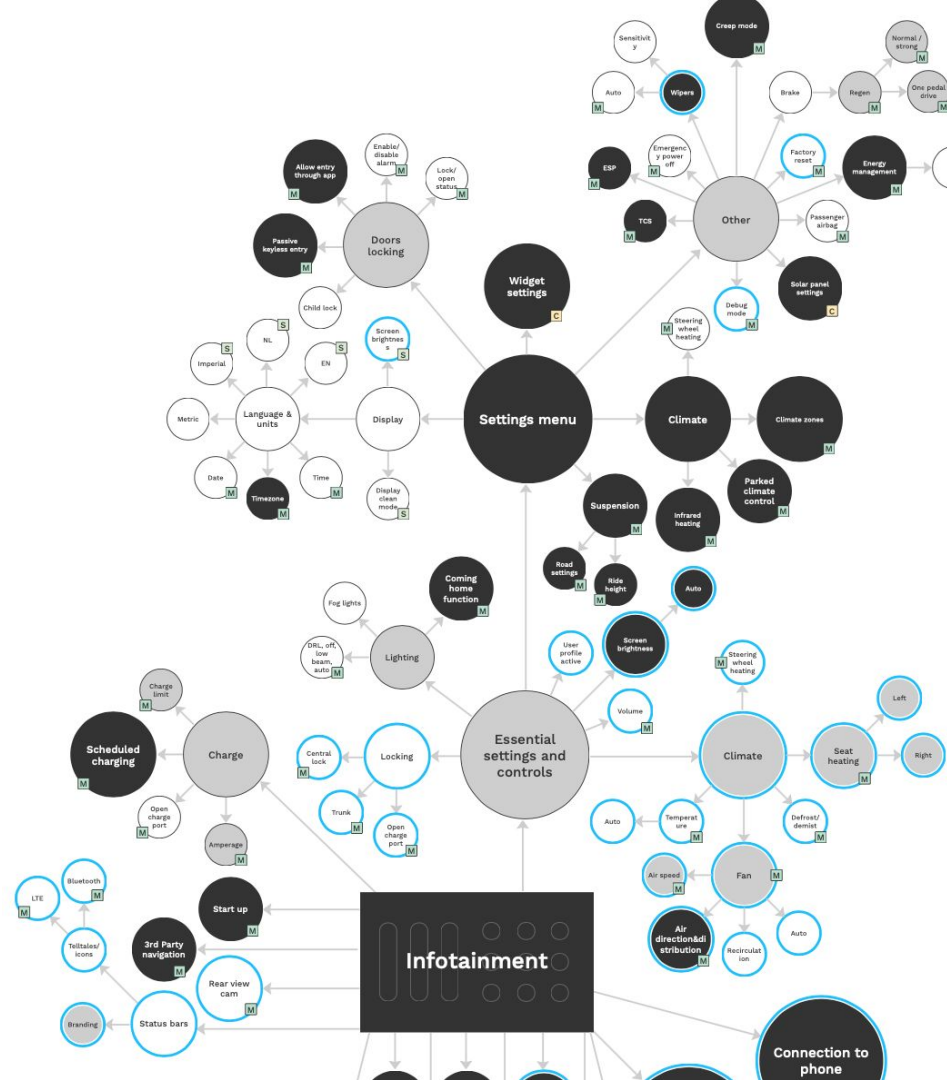
Lightyear's 'Ultra Boundary Object'



'Bubble chart' as *ultra boundary* *objects*

- Features (bubble)
- Navigation (network chart)
- T-shirt size estimation (bubble size)
- MoSCoW prioritization (label)
- Refinement status (color)
- Release (blue ring)
- Names, Personas, rights and much more

Meetings cut down from 8 hours to 30 minutes!





What I recommend

- Co-create boundary objects such as maps, mental models or diagrams specifically for alignment purposes
- Use them for strategic decision making
- Use them *in addition* to your regular artefacts



pie chart



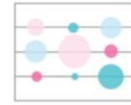
venn diagram



concentric diagram



circular chart



bubble chart



bubble race chart



line chart



area chart



scatter plot



sunburst chart



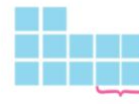
fan chart



windrose chart



bar chart



tape diagram



gantt diagram



tree map



grid



periodic table



arc diagram



sankey chart



chord chart



radar chart



polar grid



spiral graph



timeline



flow chart



binary tree



mind map



decision tree



block scheme



My LinkedIn



Let's talk! (also slower)



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