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BIG THICK BLENDING

Qualifying Service Design Thinking through
behavioral methods and network granularity & extension

Brian L. Due &
Tobias Bornakke

We no longer need to choose between precision and scope in […] observations: it is now possible to follow a multitude of interactions and, simultaneously, to distinguish the specific contribution that each one makes to the construction of social phenomena

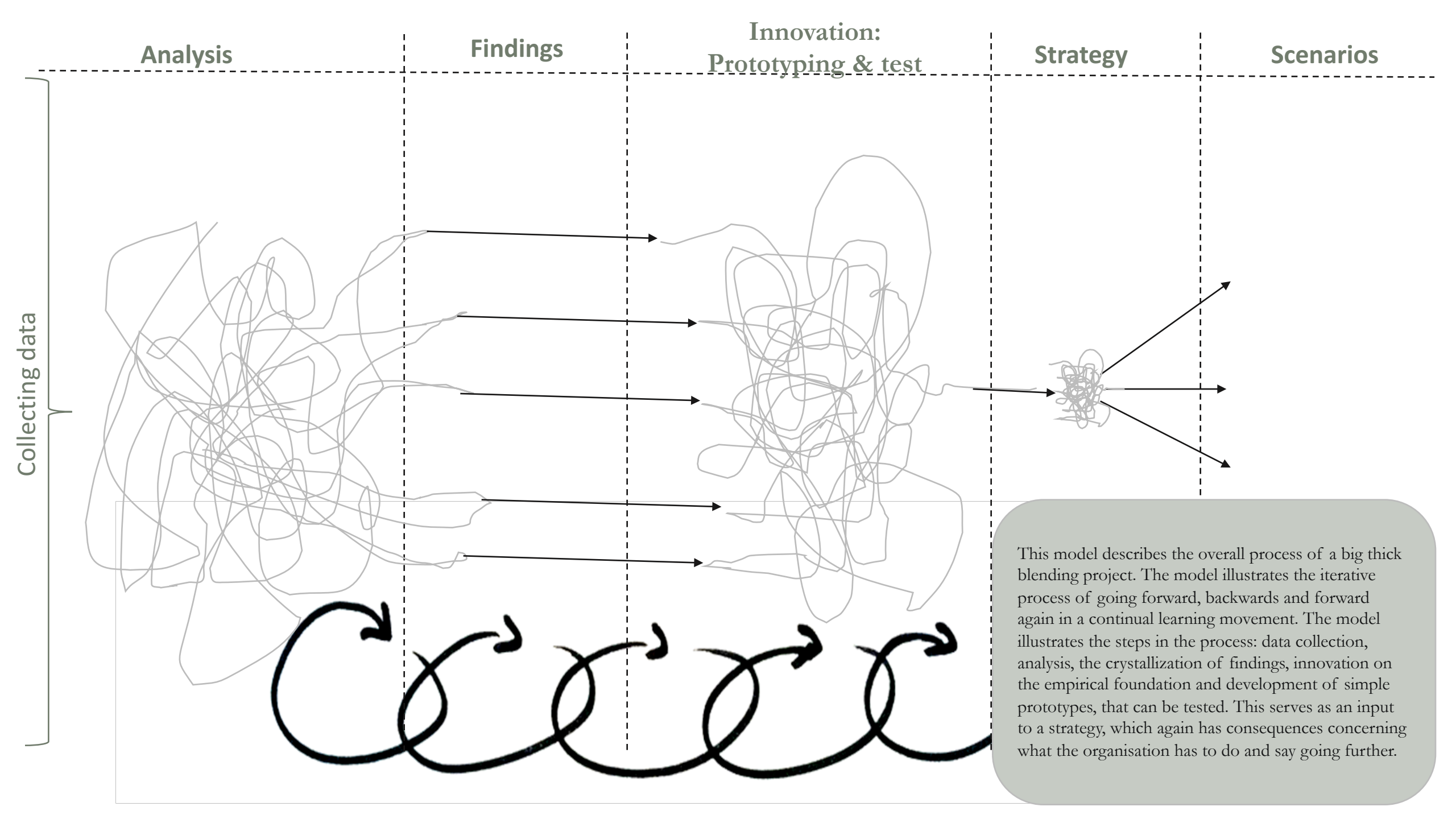
Venturini & Latour 2010

In this paper we propose a theory as a proven method for collecting, analysing and turning findings into insights of strategic use for an organisation. We show how an overall network approach (Laotur), digital methods and multimodal interaction analysis (Goodwin, Kress) provides completely new types of knowledge about who customers/users are and what their behaviour and needs are during a "journey".

Identifying real needs and designing solutions

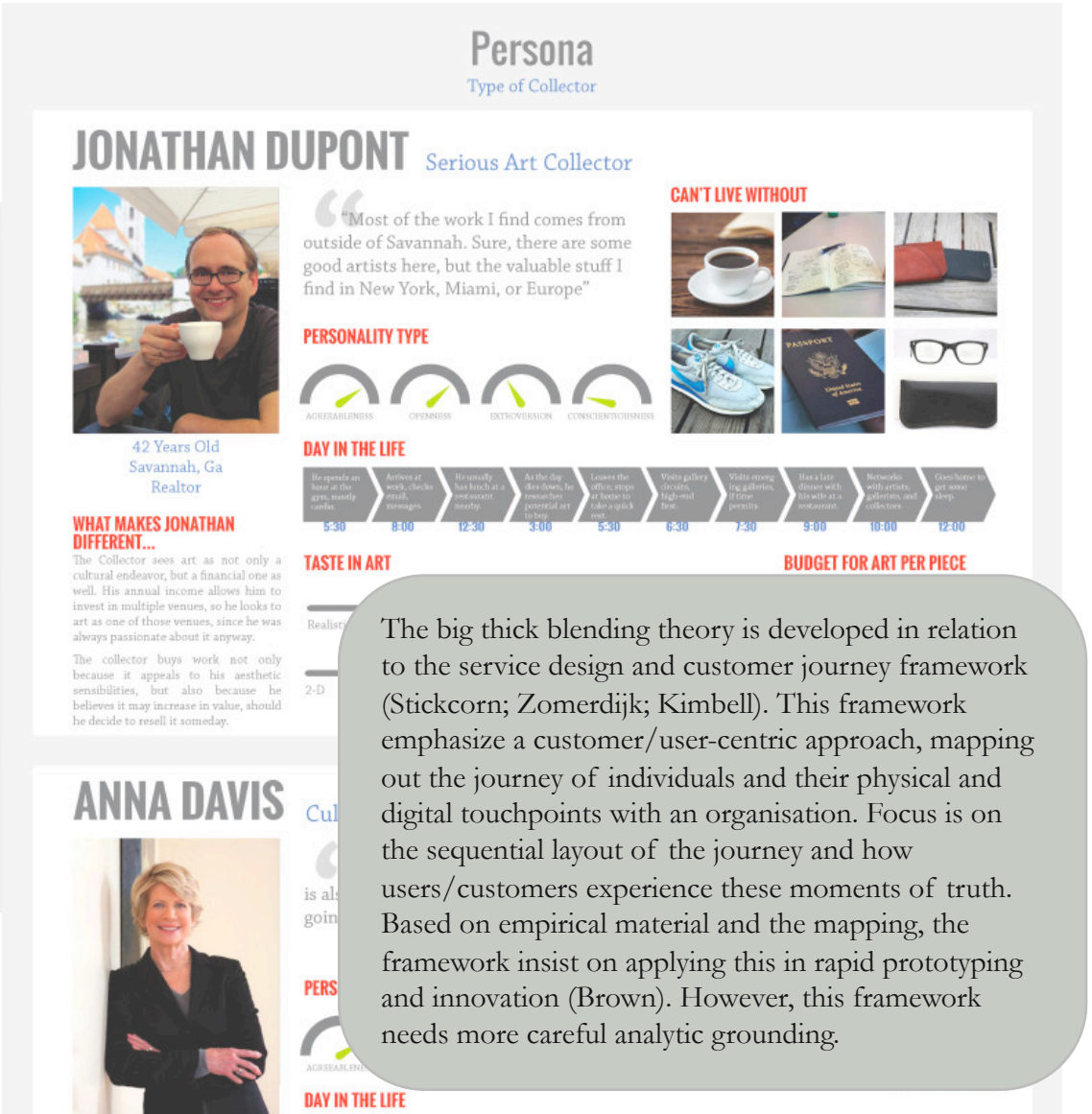
- Who are the potential and current users/ customers?
- What do customers do (behaviour)?
- What do customers want (needs)?
- What do customers do with their needs?
- How can we collect and analyse behaviour and needs?
- How do we transform data into insights with strategic value?
- What is the best methodical process?

"Someone calling themselves a customer says they want something called service."



This model describes the overall process of a big thick blending project. The model illustrates the iterative process of going forward, backwards and forward again in a continual learning movement. The model illustrates the steps in the process: data collection, analysis, the crystallization of findings, innovation on the empirical foundation and development of simple prototypes, that can be tested. This serves as an input to a strategy, which again has consequences concerning what the organisation has to do and say going further.

Customer journeys and personas: the need of new methods



The big thick blending theory is developed in relation to the service design and customer journey framework (Stickcorn; Zomerdijk; Kimbell). This framework emphasize a customer/user-centric approach, mapping out the journey of individuals and their physical and digital touchpoints with an organisation. Focus is on the sequential layout of the journey and how users/customers experience these moments of truth. Based on empirical material and the mapping, the framework insist on applying this in rapid prototyping and innovation (Brown). However, this framework needs more careful analytic grounding.

Problem 1:
How to identify a MOT?

Existing touchpoints can ”easily” be identified in great numbers.
But how to identify:

1) unknown touchpoints?
2) touchpoints reflecting Moments of Truth?

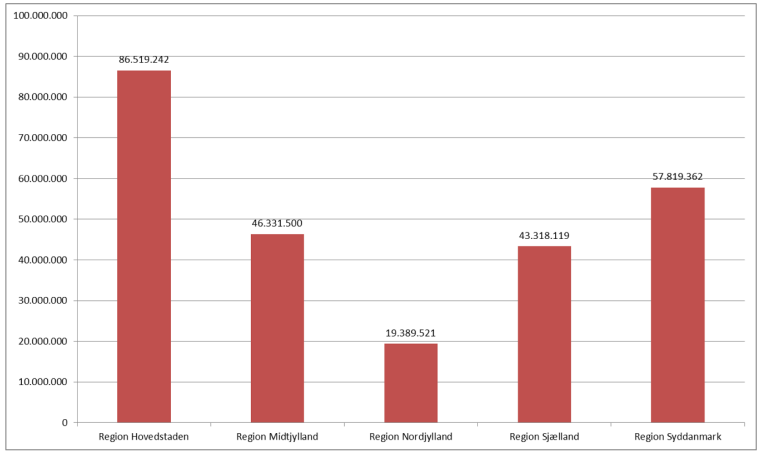
Usually answered through: interviews/focus-groups/surveys/plain guessing.

That is: Methods that presupposes individuals who are able to describe their own needs and journeys, reported and reflected upon their experiences.

However, mostly people are bad at understanding and describing experiences.

The usually applied empirical methods are interviews and focus groups. However, these methods are primary useful to gain knowledge about how people *describe* their experiences. They do not give any precise account of what happened and how people acted. Other used methods are statistic analysis on survey data, which is often useless in regard to making any bigger assumptions about correlation and causalities. As a supplement and important extension, we propose post-behaviouristic methods.

Problem 2:
How to conduct reliable analysis?



Useless surveys and statistics

Identity constructing focus groups and interviews

Pure guessing and gut feeling. "Fake" ethnography.

Reliability and validity of analysis must be based on the appropriate chosen method, conduced in an appropriate way. However, in the practical world of Service design consultancy, these standards are not met. Statements from interviews and focus groups are treated as 'ground truths', ethnography is "faked" and used as post-descriptions in order to "prove" a point, before finally decontextualized and often unrelated statistics are sprinkled on top of it all.

We need Network Granularity & Extension

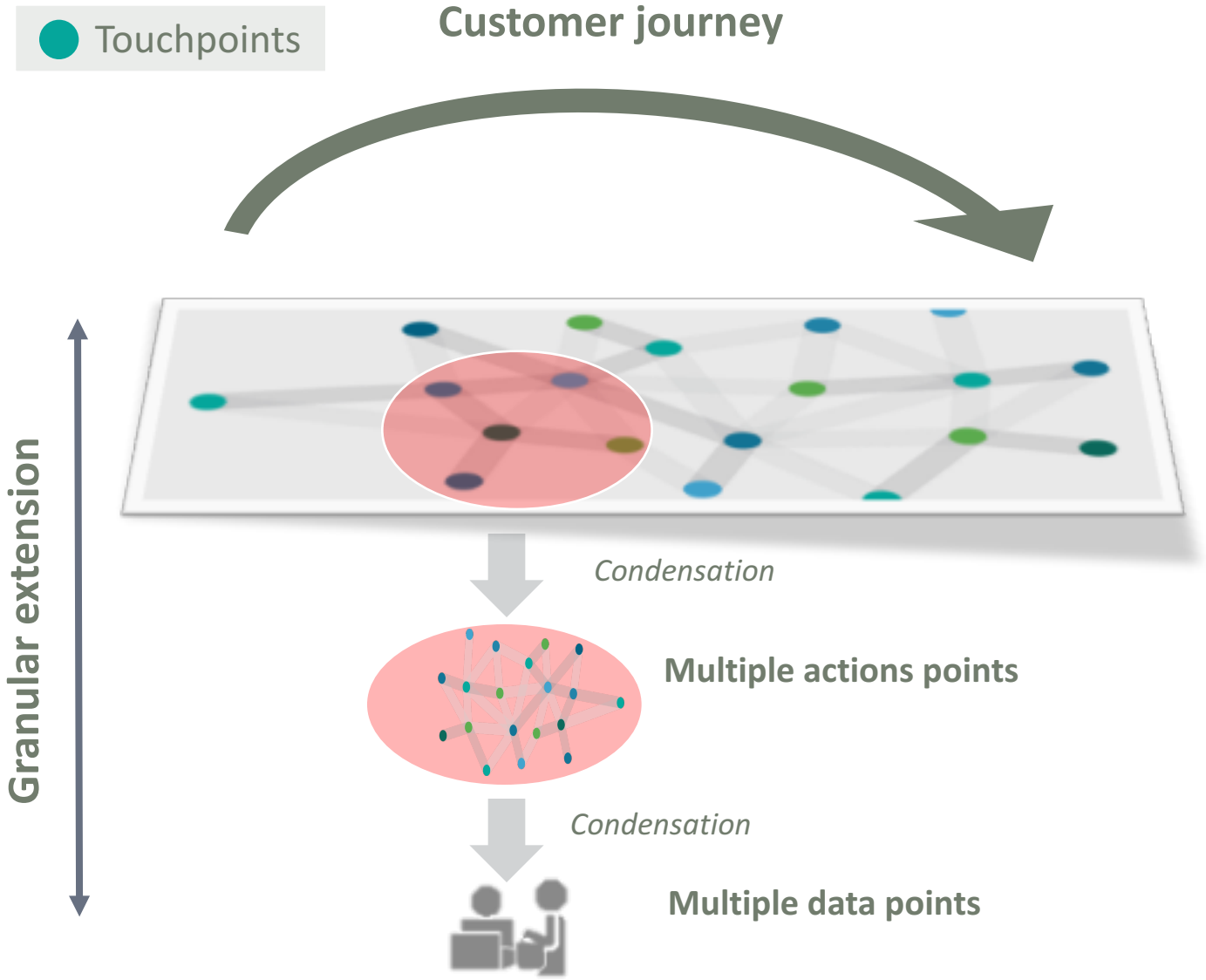
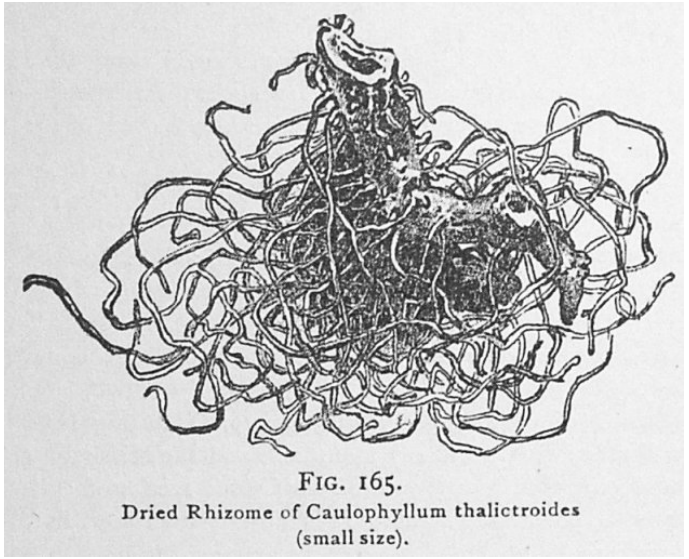


Figure 1:
The granular/extension model



We propose the theoretical framework of network analysis in the tradition from Actor-Network-Theory (Laotur, Latour & Venturini). ANT is a descriptive theory interested in mapping out relations. This is why it is suitable in relation to service design. Through the ANT inspired vocabulary it is possible on the analytical level to go deeper and to make new connections. Shown above is a metaphor for *granularity* (grain+clarity). Just like one may observe the lines in a rhizome (Deleuze & Guattari) from any angle, and zoom in and out on the details, it is also possible to zoom between levels of interactions and move across the sequential outline of the customer journey. Each node in a network may be zoomed in upon for further analysis, as it consists of a multitude of social actions and data points. At the same time, the network is extended sequentially in time and modus, which on the analytical level makes it possible to connect data that is otherwise separate.

Big & Thick blending

(opposed to method triangulation and mixed methods)

Thesis → Synthesis ← Antithesis

Thick behavioural data

- Observations
- Video ethnography

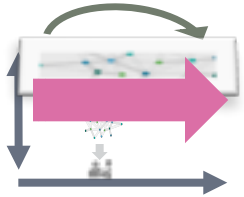
Big behavioural data

- Digital methods
- Video analytics

Different types of behavioural methods can be applied in order to get insights about users' experience and needs. We propose two different methods: big data analysis of different types of number data and thick data analysis of qualitative data. Opposed to method triangulation we do not use the methods separately to validate the other methods, but combine the findings in a blending process (Due; Fauconnier & Turner). The key finding from this kind of work is that each method brings context to the other on a small scale and thus links the analytical storylines together while simultaneously making the analysis more precise. The big thick blending theory is thus an abductive method, that is directly linked to the network theory in the sense that the different methods provided different insights on both the granular axe and sequential axe.

Figure 2:
The big & thick blending model

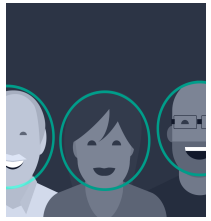
New approaches for linkage

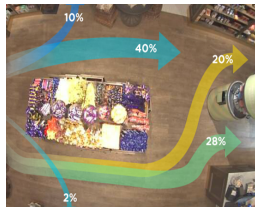


1. Direct linking (unique id)

Link between buying and evaluating

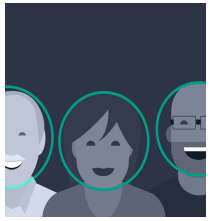
2. Temporal linking (timestamp)





Link between behavioural patterns and buying

3. Narrative linking (segments, but increasingly behaviour)



Link between specific buyers and their buying behaviour

A key element in moving between these heterogeneous data thus become the analytical ability to link these often very different datasets together. In the quantitative tradition this have often been facilitated through what we call direct linking or linking based on a unique identify i.e. full name, system id. However, the increasing use of digital data that often carries a broader scope (several behavioural traces) and timestamps (Uprichard 2012) opens up new ways of linking datasets through what we call *temporal linking* (activity happing on exactly the same time) and *narrative linking* (by moving segments/personas across different datasets).

Temporal linking is an old quantitative trick, which has received new relevance with the increasing availability of timestamped digital data. Narrative linking, on the other hand, is at the centre of the qualitative methods, but new to quantitative research.

Research project for Synoptik A/S

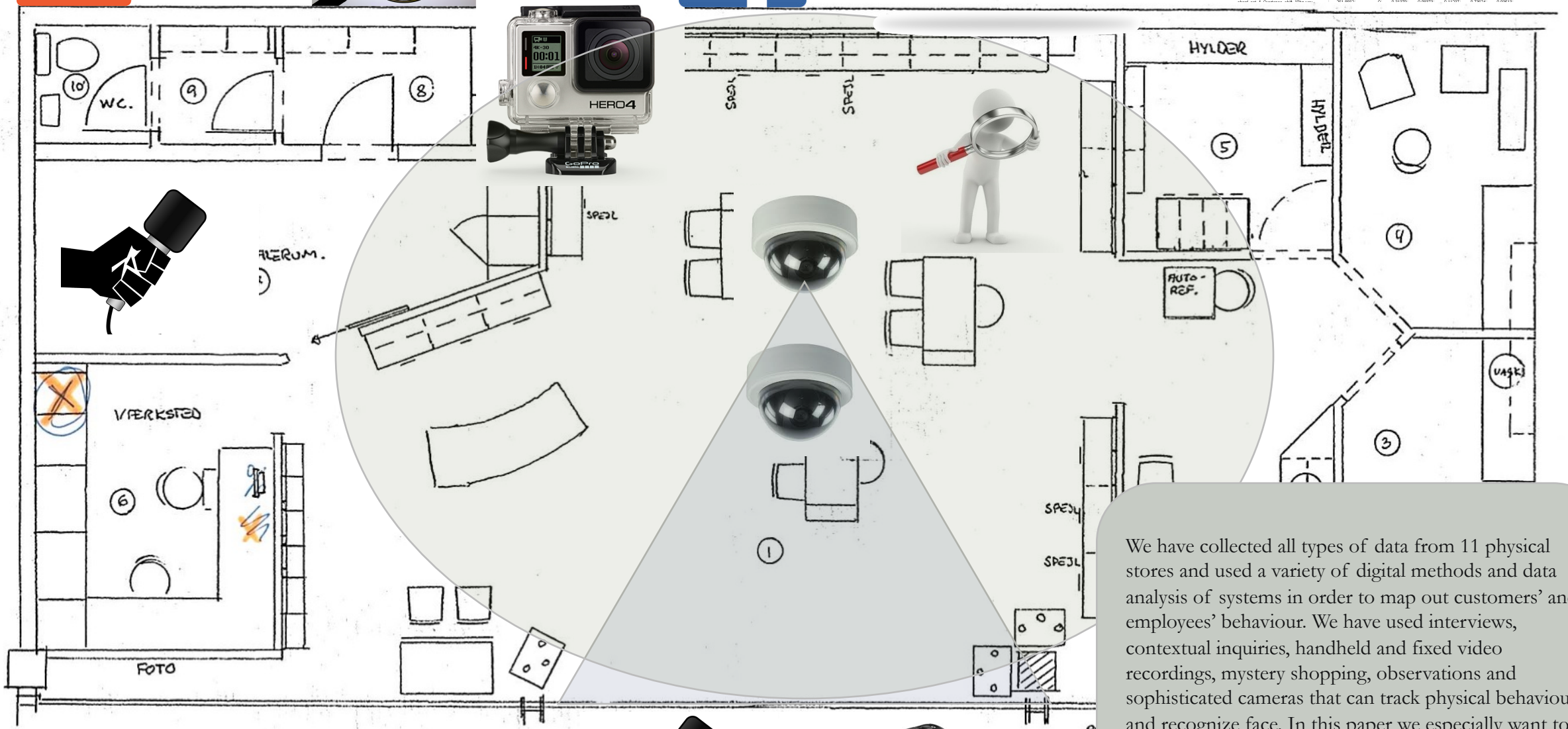
financed by Synoptik Fonden

Synoptik-Fonden

synoptik

1. What are customers' needs and how should employees *address* and *interact* with customers *in shops*?
2. What are customers' needs *outside the shop* and in *digital space*, and how could Synoptik get in contact with relevant potential customers with relevant content in relevant situations?

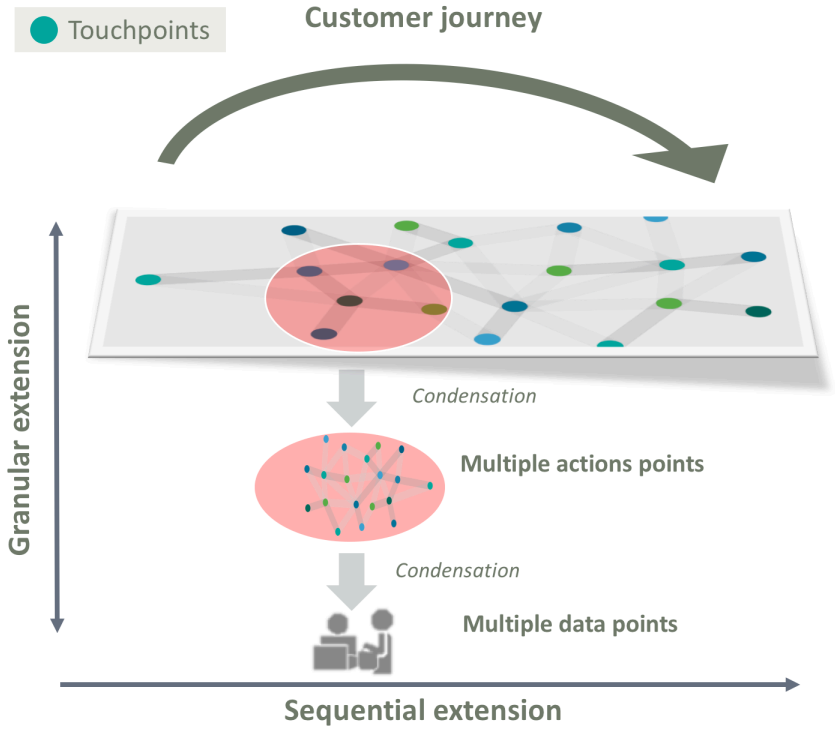
Based on the theoretical framework, we now want to illustrate the points made through some examples. The empirical background for this work is the Danish retail chain Synoptik, which is an optician with more than 100 shops. The project has been funded by the foundation Synoptik-Fonden. We have worked with two different projects concerning 1) how to improve employees' interaction with customers and 2) how to understand customers' complete journey. The overall goal in both projects is to gain knowledge about customers' behaviour, needs and experiences in order to better interact with them in physical and digital ways.



We have collected all types of data from 11 physical stores and used a variety of digital methods and data analysis of systems in order to map out customers' and employees' behaviour. We have used interviews, contextual inquiries, handheld and fixed video recordings, mystery shopping, observations and sophisticated cameras that can track physical behaviour and recognize face. In this paper we especially want to focus on the video ethnography (Heath), video analytics and digital methods (Venturini & Latour).

3 data 'moves'

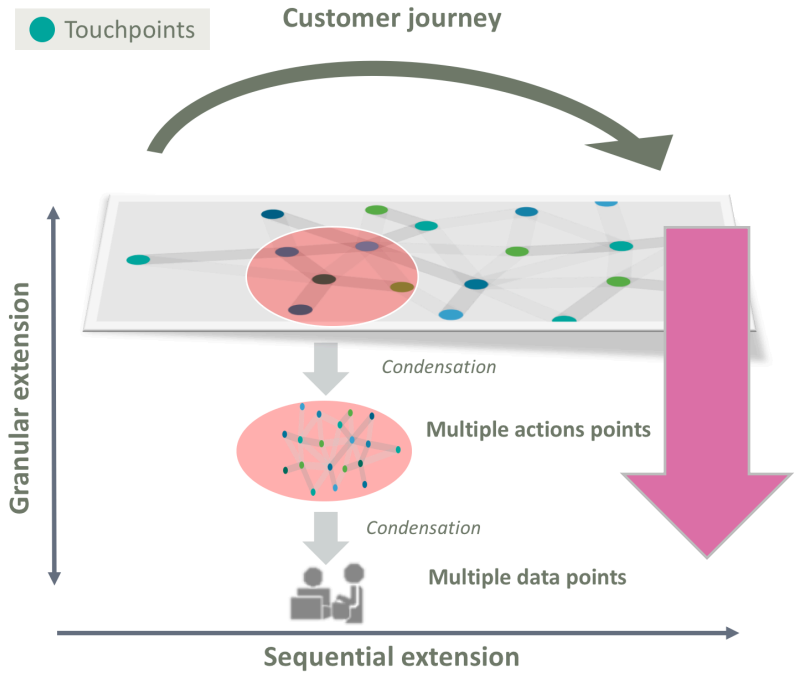
I. From big to thick data (Granular)
II. From thick to big data (Granular)
III. Aggregated MOT (Sequential)



The big thick blending theory we propose is based on three, internally non-hierachical, analytical moves. On the granular zoom-level, one can make the analytical move from big data and "down" to thick data or the opposite, and on the sequential level, different types of data sources – on any granular level – is combined in a blending process.

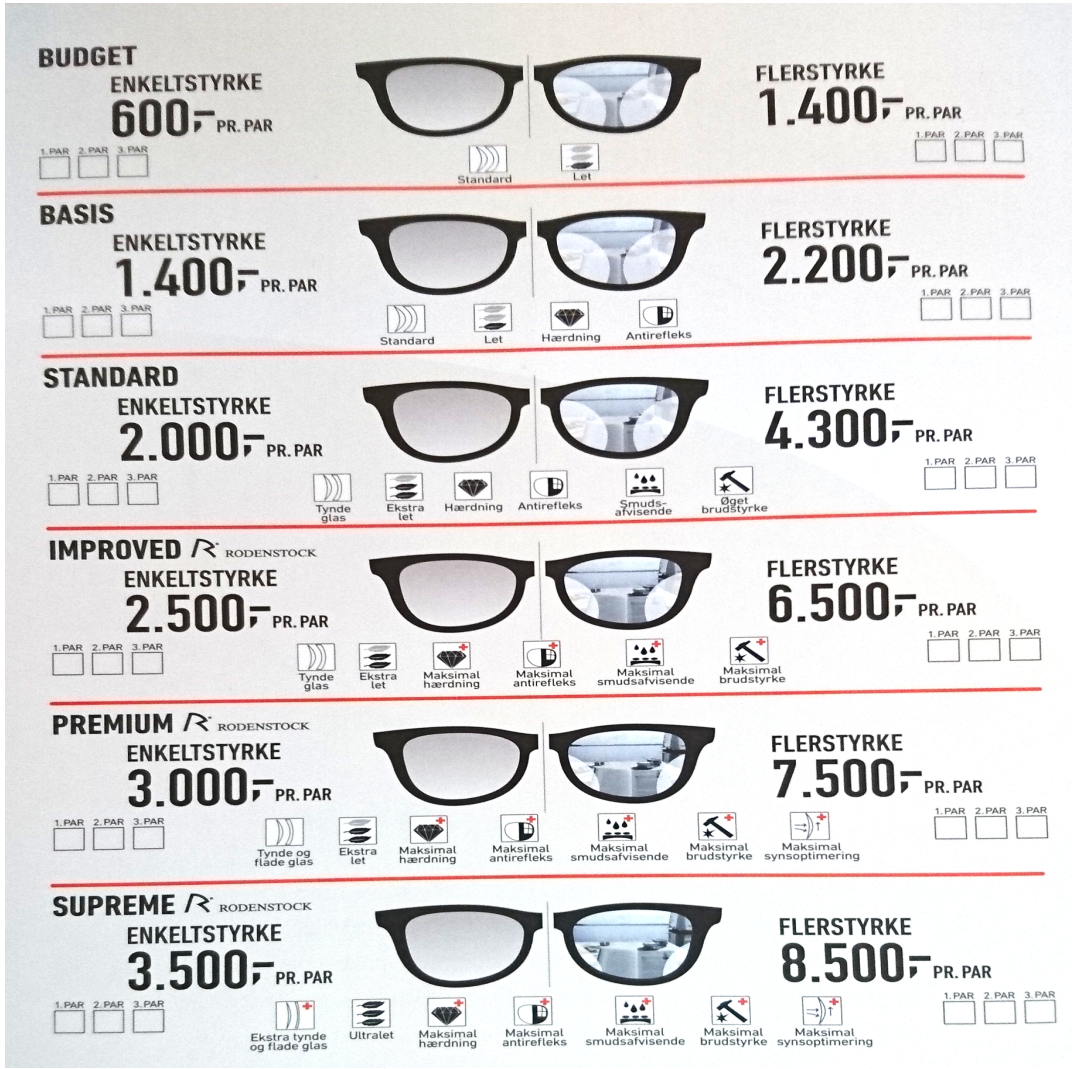
Granular extension (I)

From big to thick data



In the following we exemplify how to move between different granular levels from big to thick data, what we denote a 'big thick blending'-process.

Point of sale: The case of a table and a chart

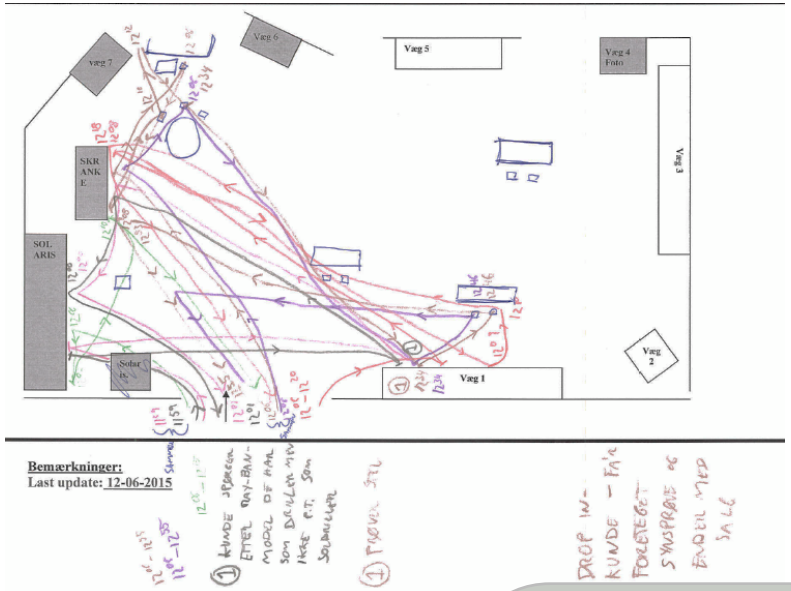


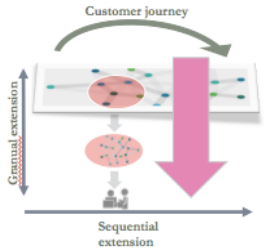
The data-move made it possible for us to to identify and innovate on an overlooked glass chart crucial to the customer journey. Being a central part of the everyday workflow but overlooked in the internal innovation processes, the chart carried similarities to what Garfinkels have described as everyday objects that are "seen but unoticed" which only fine grained analysis can bring into attention (Norman).

Step 1:

Big data mapping & focused fieldwork

→ what is it about tables?

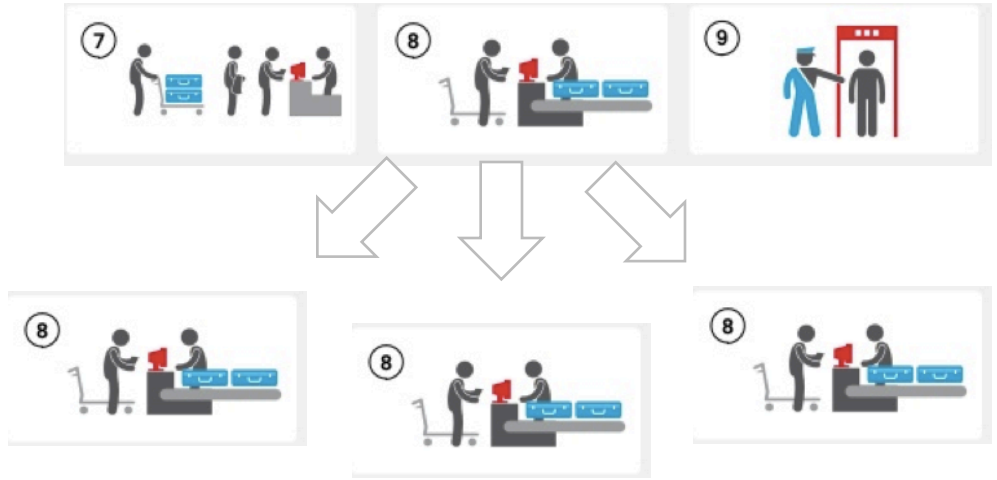


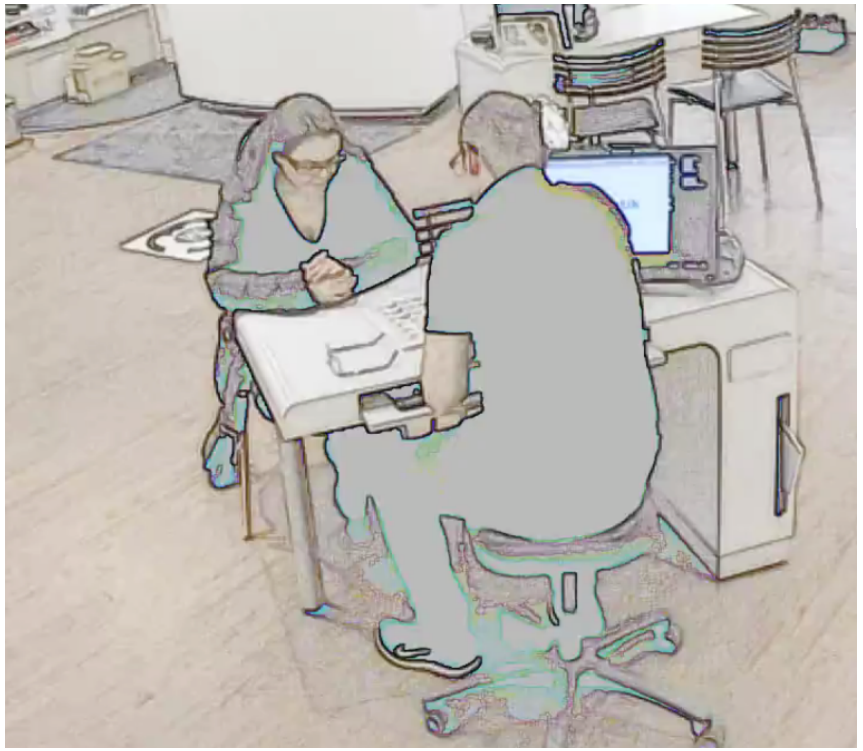


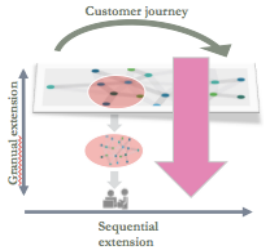
Our analysis took point of departure in big data collected through video analytics of a shop. The camera detects people's behaviour as they moved through the store: what route did they follow through the store and where did they stop and interact with the store and its personnel. These observations were further qualified through mystery shopping and field observations. In this initial work we found that the activity of the store gathered around the checkout counter and the interview tables, which supplied us with empirical grounding for zooming in on the interaction as these two points.

Step 2:
Focused video recordings of interactions at tables
→ what is it about charts?

- Video recording of actual behaviour without disturbing, e.g. using many fixed cameras
- Video based contextual inquiry and observations: follow along with customers and get explanations about practice



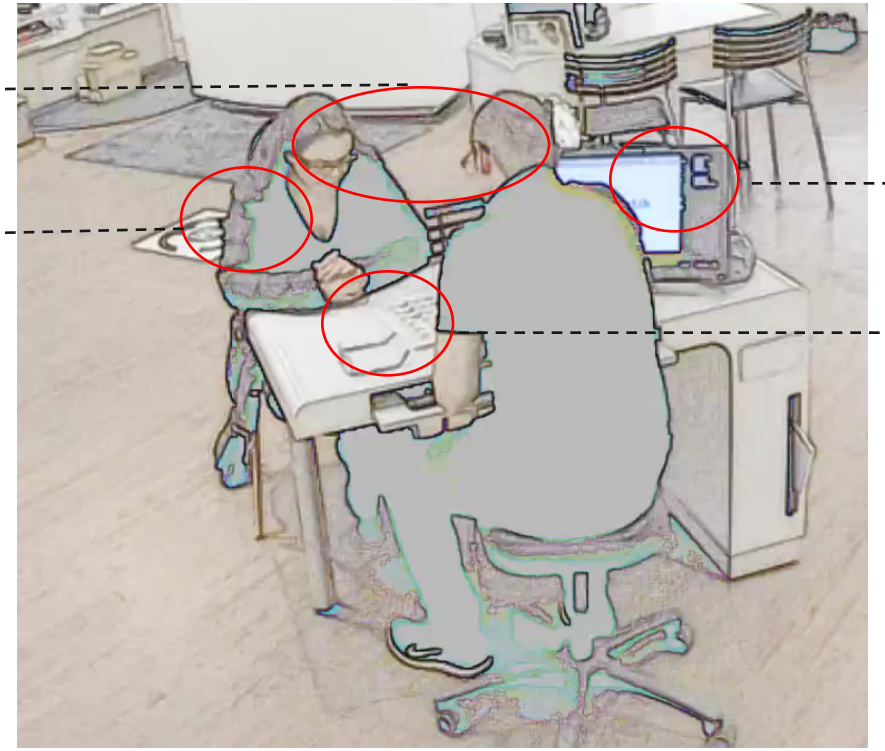




To zoom in on the deeper graunlar leveles of interaction at the tables, we made use of video ethnography, mounted (Gopro) and handheld cameras to record a sample of table-interactions. Through the journey, customers will encounter touchpoints where multiple interactions are squeezed together in a very short time frame. Following people's own actions and orientations from a multimodal interaction analytical perspective we are able to know the details of their actions (Goodwin; Mondada; Due). From this analysis we found (i.a.) that the optician use the chart as an cognitive object (Hutchins) for facilitating the talk about glasses.

A note on post-behavioural methods and Distributed Cognition

Talk and embodied actions are visible and recipient designed

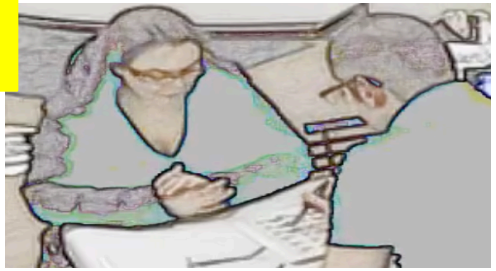


Objects and material structure are resources for distributing meaning

We do not reject interviews and focus groups as valid methods per se, but we want to go deeper regarding how to gain knowledge about customers' behaviour and needs. An objection is that we do not know *why* people do as they do if we do not ask them. That is wrong. Based on the theories of distributed cognition (Hutchins) and the extended mind (Clark), we emphasize that a great deal of people's thoughts and feelings are not just in the head, but out in the wild; in the knowable, accountable, visible and social world. Is that not the only way any of us "know" anything about each other – through the sign production in the social world (Peirce)?

Step 3: Analysis

Who's "man"? – expert identity or seller identity?



Customer and optometrist looking at chart

57OP: det man ( ) minimum vil anbefale (.) vec de styrker, du har
what you (.) would recommend as a minimum (.) with the power you have

Objective or subjective?

58 det- det såen hvad jeg selv synes ↑ikk
that- that's what I think of it, ↑right

59 (0.5)

Contrast to what; why?

60OP: der vil jeg faktisk anbefale (.) sådan noget som det her
I will actually recommend (.) something like this

Optometrist makes circle movement with pen

Proposing product; why that one?

Using chart – is it helpful?

61 (0.9)

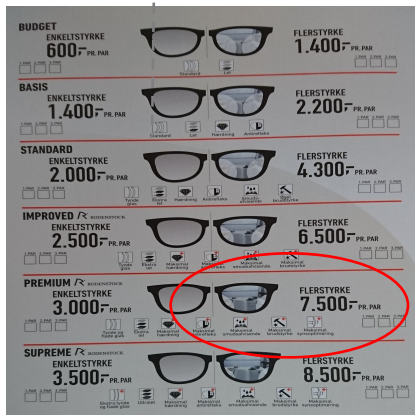
Deixis; pointing without explaining

62OP: ikk øh::m (.) hvad siger du til det?
right uh::m (.) what do you think of that?

What? Price or product?

63 (2.6)

No uptake, she's confused, why?



64 CU: (i mit ↑tilfælde)
(in my ↑case)

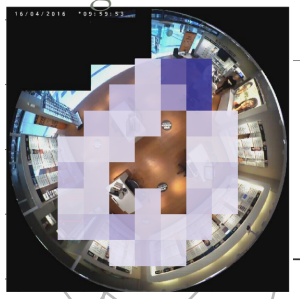
65OP: mmh
mmh

So we focused on this chart, still going deeper on the granular level through a multimodal interaction analysis (Due, see also Hepburn & Bolden) to explore the rich semiotics of the chart. In the current example a conversation ends by the optician asking the customer what she thinks about "that" (line 62). There is a very long pause on 2.6 sec, and then the customer begins a new talk. The customer clearly don't understand what "that" is due to extensive amount of information the chart pressents. A pattern identified across several table-conversations.

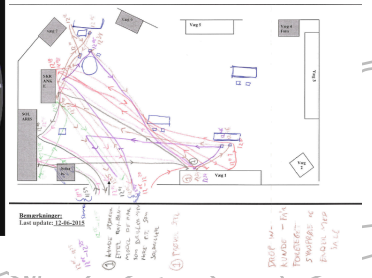
Step 4: innovation og strategy

Analysis | Findings | Innovation: Prototyping & test | Strategy | Scenarios

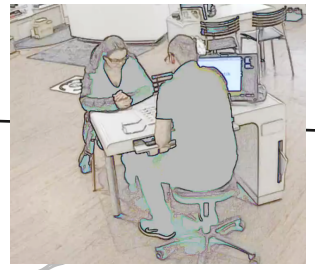
Big data



Fieldwork



Tables

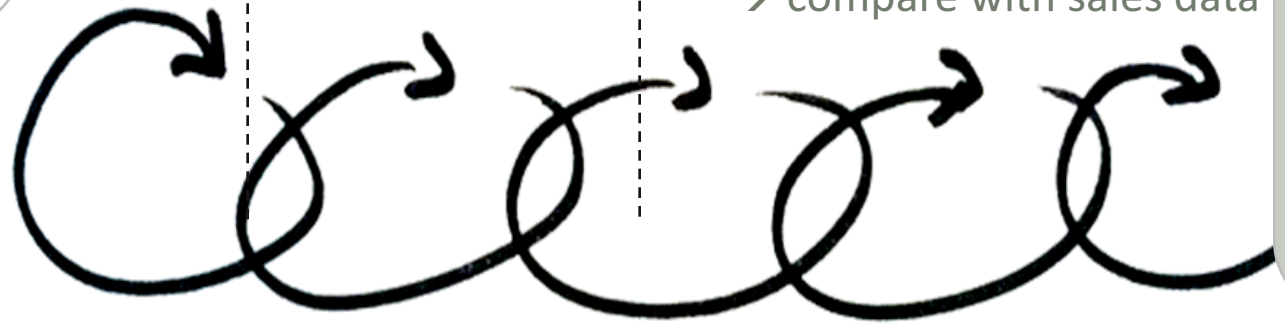


Old chart

”New” chart

Test in shop
→ compare with sales data

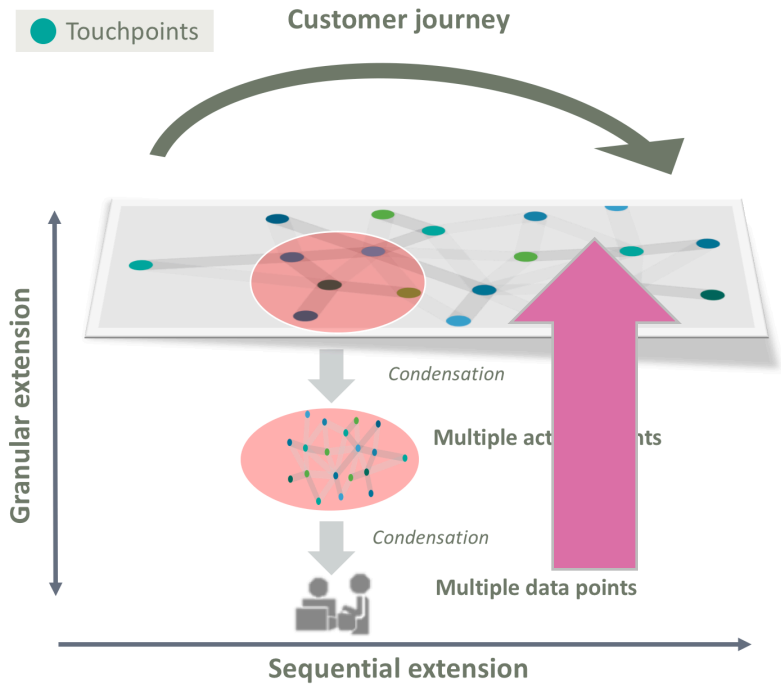
New strategic position based on a real customer centric foundation



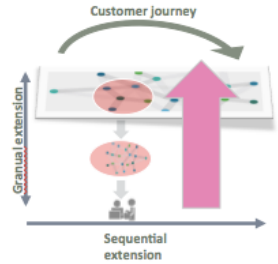
Both the charts importance and its tendency to cause confusion for customer should be clear from this example. The story of the big thick blending process, used on the granular level, makes it possible to zoom out again and take this finding about the chart as a starting point for innovation. This innovation-model thus shows how the analytical process started in the big data, zoomed in on the thick data and interactional details, and then proceeded to new innovation, prototype development and test.

Granular extension (II)

From thick to big data



The case of constructing valid personas



Den handlekraftige

Den handlekraftige mand besøger primært synoptik **på vej** til arbejde, i frokost pausen, til fyraften, eller lige før lukketid.

De kvalitetsbevidste

De kvalitetsbevidste kvinder bruger tid på deres besøg og de bruger ofte søndagen til at ”kigge”.

Den Jordnære

Den jordnære og han/hendes familie har 8-16 job som man ikke lige forlader. At købe briller er derfor noget man primært gør uden for arbejdstid og sammen med familien.

Den handlekraftige

Den handlekraftige mand besøger primært synoptik **på vej** til arbejde, i frokost pausen, til fyraften, eller lige før lukketid.

De kvalitetsbevidste

De kvalitetsbevidste kvinder bruger tid på deres besøg og de bruger ofte søndagen til at ”kigge”.

Den Jordnære

Den jordnære og han/hendes

Den handlekraftige

Den handlekraftige mand besøger primært synoptik **på vej** til arbejde, i frokost

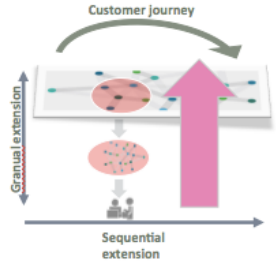
De kvalitetsbevidste

De kvalitetsbevidste kvinder bruger tid på deres besøg og

briller er derfor noget man

In this example we want to show how the move on the granular level from thick data to big data, through a big thick blending process, made it possible for us to innovate on the construction of personas (Nielsen).

Step 1: Hunch from thick data
Constructing personas, e.g. *The mundane*



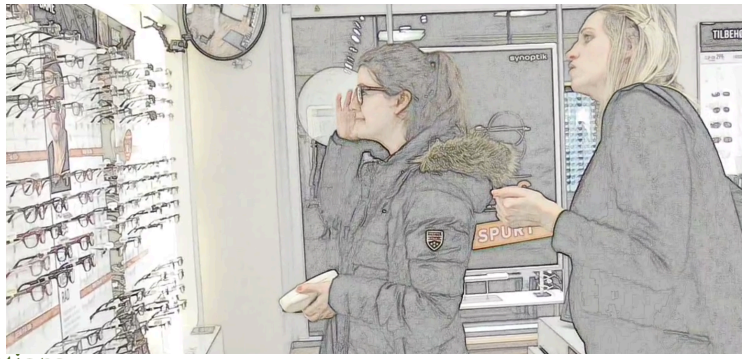
Project: Value for money. Nice and not too exotic glasses.

Expectations and needs: A warm and personal service from employees.

Values: Loyality and traditions. Personal relations.

Dislike: Surprises and too much attention.

Typically: Woman in her 20's



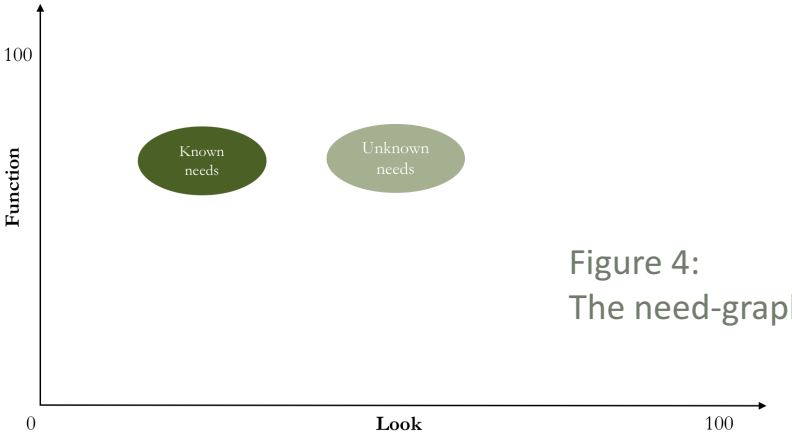


Figure 4:
The need-graph

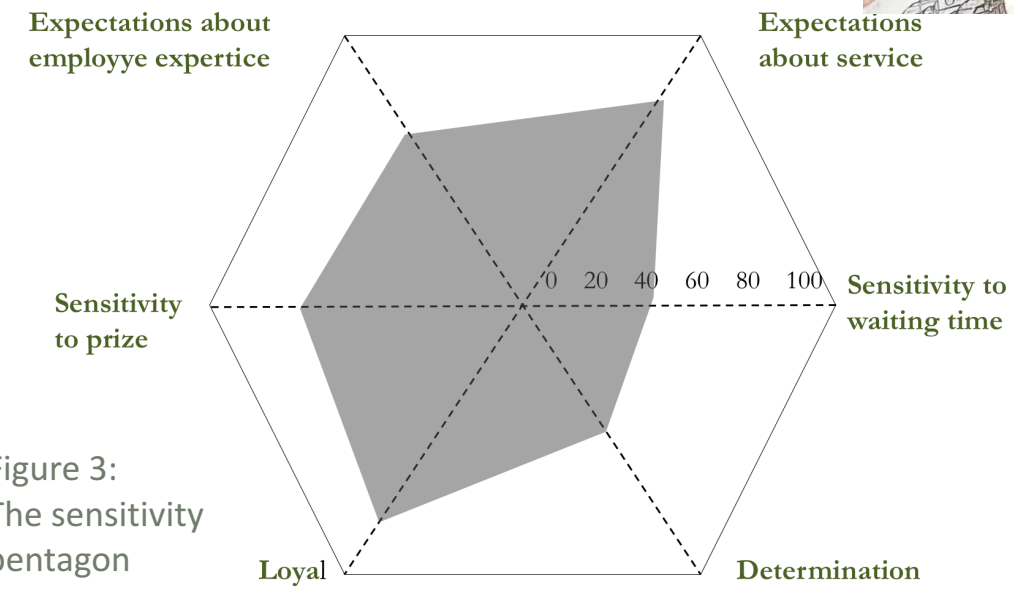
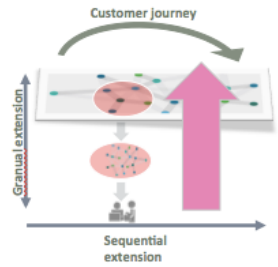
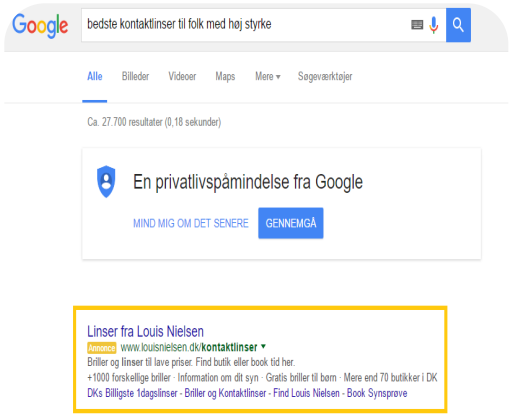


Figure 3:
The sensitivity pentagon

Based on the observations, interviews and most of all the video recordings of customers' different types of behaviour, we developed a large pool of potential personas. Informed by theories about archetypes and basic needs (Jung), we constructed different score systems e.g. the sensitivity pentagon and the need-graph. These tools are effective in exploring potential archetypical customers, however it provided us with little knowledge on the greater patterns of these personas: What share of the total number of customers did each persona represent and could they be linked to concrete behavioural activities?

Step 2: Qualifying the behaviour of a persona (The mundane)

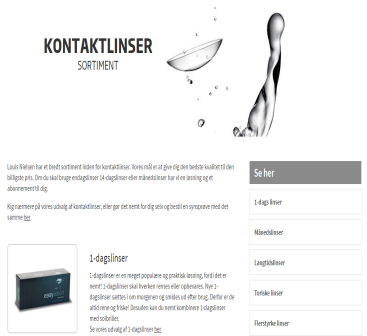


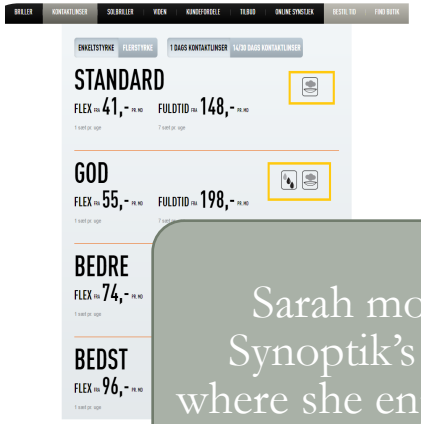


Search word:

”Best contact lenses for people with high strength”

Visits Louis Nielsen’s overview, but leaves again: "Too much text".

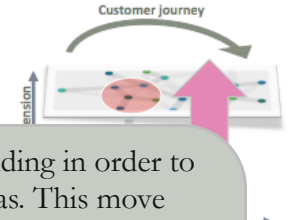




Sarah moves on to Synoptik’s homepage where she enjoys the easily interpretable pictogram

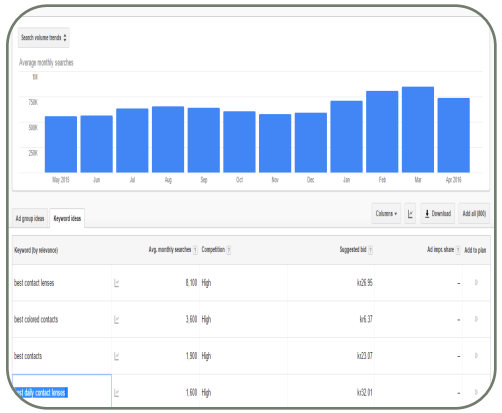
To link the personas to concrete people with traits of the identified personas we first conducted a number of interviews and think-aloud test. This approach made it possible for us to study the behavioural preferences of people with clear similarities to our personas, through this process extending the persona’s characteristics with relevant and exemplifying behaviour.

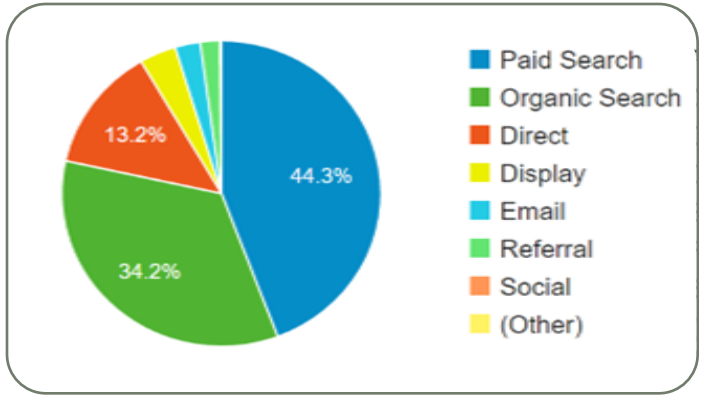
Step 3: Stabilizing personas through big data
What the persona type usually do

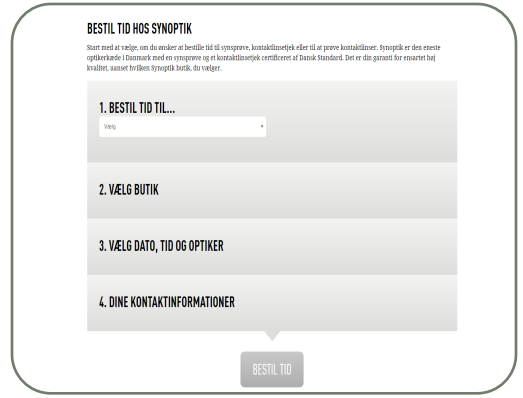


We then moved "upwards" in the big thick blending in order to put more generalizable features into the personas. This move were made possible by drawing on behavioural web-data from Google Analytics and google Search and narratively linking this data to the the personas.

In the example it then became possible for us to describe the entrance points and web-behaviour for a specific persona, the mundane.







Google Search
- Long tail search ("Best daily contact lenses", 1.600/month)

Entrance / Google analytics
- Dominated by paid (44%), search (34%) and direct access (13 %)

Behaviour (Google analytics)
- Shorts visit (9.17%) → limit patience
- Attracted by deals especially on sunglasses (→ Confirms persona)
- Nearly 15% books a time

Analysis

Findings

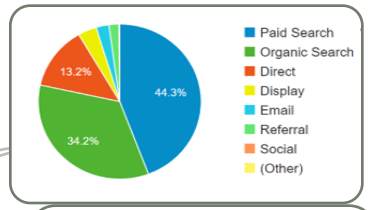
Innovation: Prototyping & test

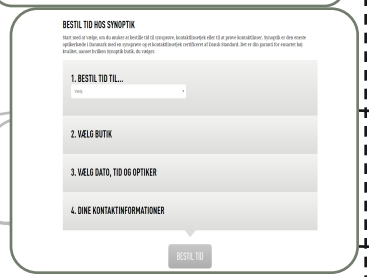
Strategy

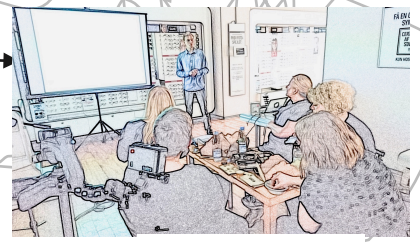
Scenarios

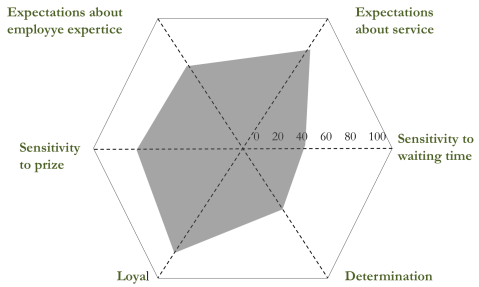
Constructing personas

Web behaviour







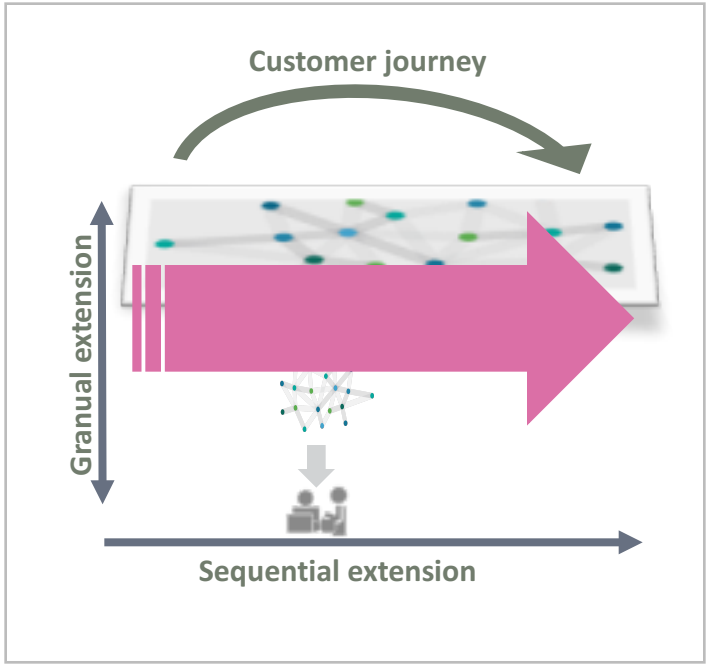


New strategic position based on a real customer centric foundation

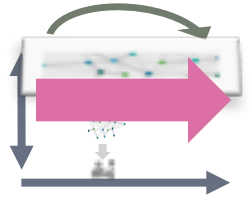
If we take the findings from the granular process, going from thick data to big data, and place it in the innovation-model, we used the findings to construct valid personas. These are then used in two different prototype scenarios: 1) to build a prototype customer-centric homepage design and 2) to build a training workshop for employees, where they themselves further develop the personas in specific and locally relevant ways.

Sequential extension (III)

Aggregated MOT

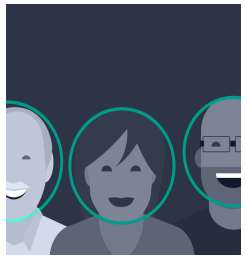


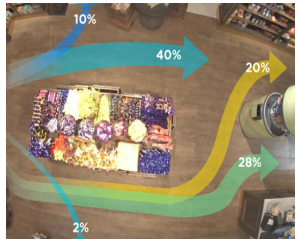
The case of linking customer journeys



Customer journey

CARAT



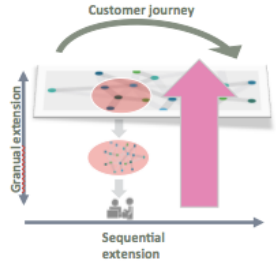


TRUSTPILOT

The third and final move that constitutes the big thick blending process is what we term sequential linking. This covers the act of combining different data sources into the same analysis in order to gain a more seamless image of the customer journeys that the different personas travel.

Sequential extension

Step 1: Hunch from thick data
Constructing personas, e.g. *The mundane*



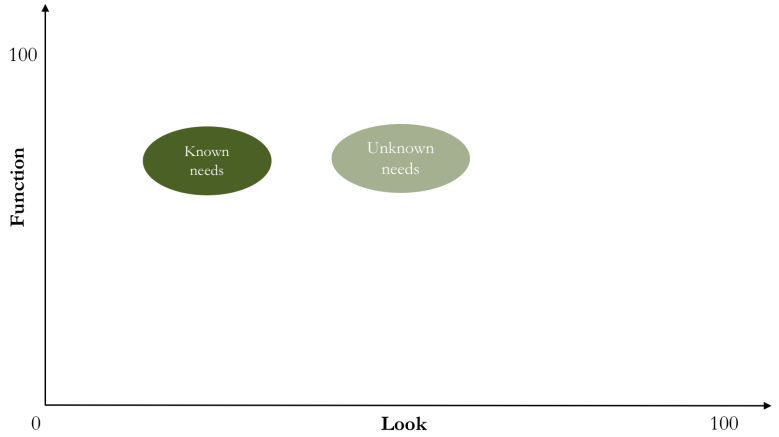
Project: Value for money. Nice and not too exotic glasses.

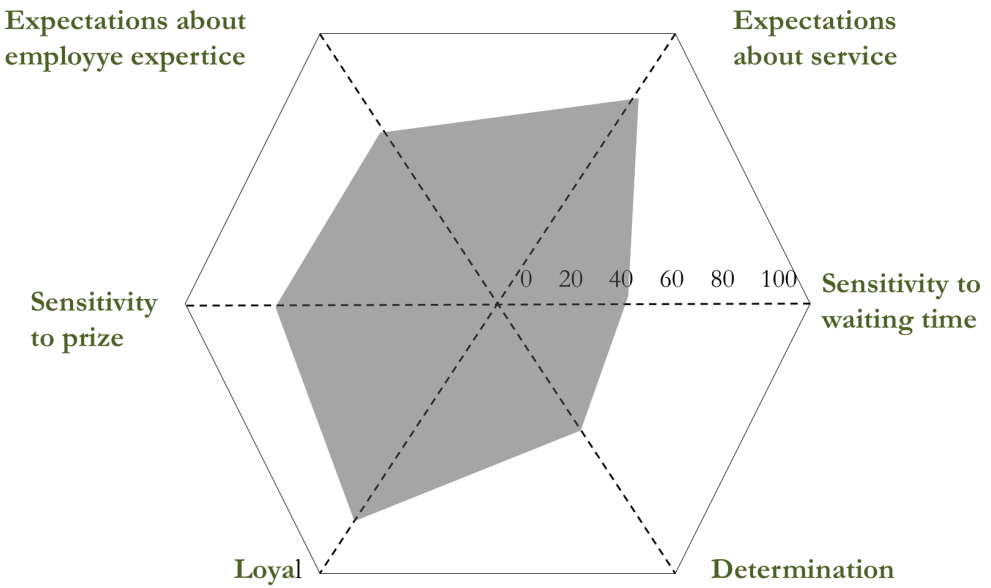
Expectations and needs: A warm and personal service from employees.

Values: Loyality and traditions. Personal relations.

Dislike: Surprises and too much attention.

Example: Woman in her 20's.

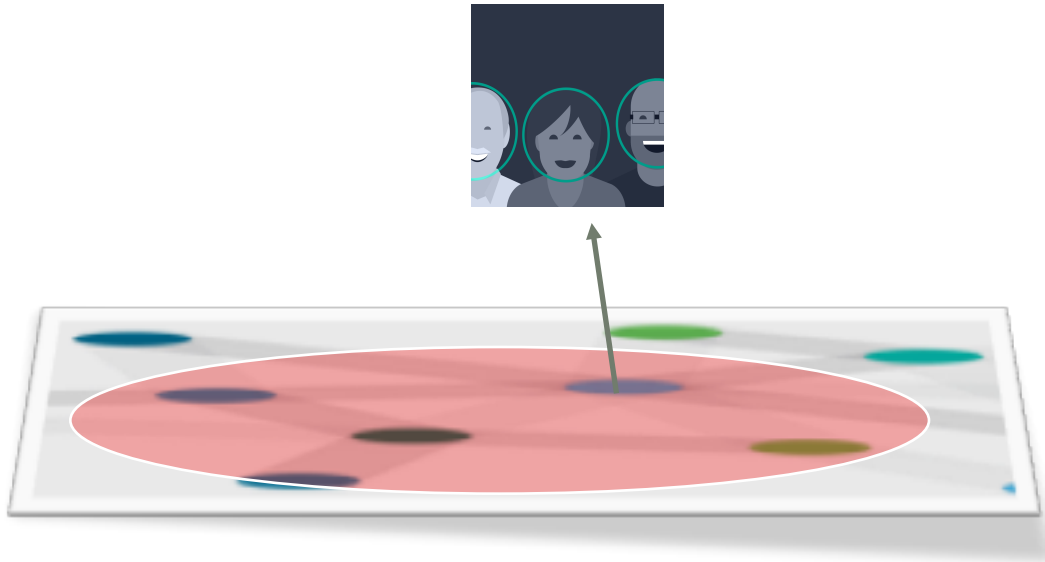


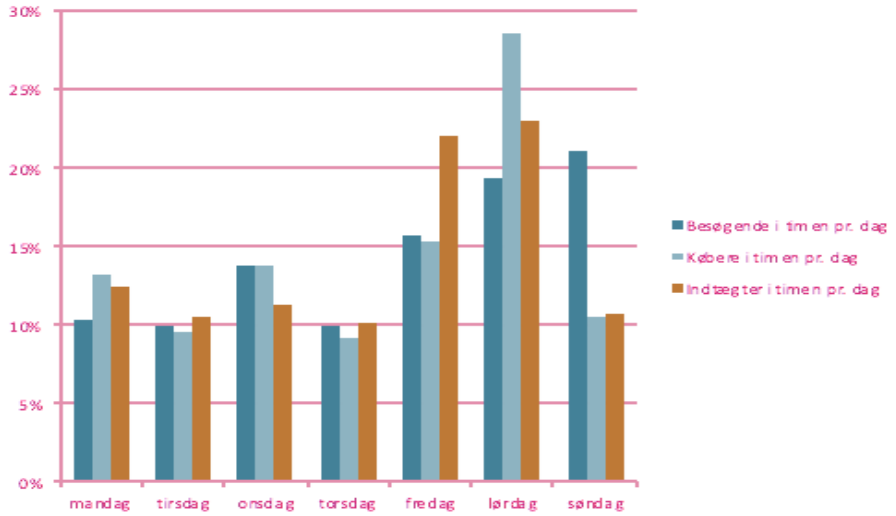


Once again we depart from our constructed personas.

Step 2: Narrative linking through segments

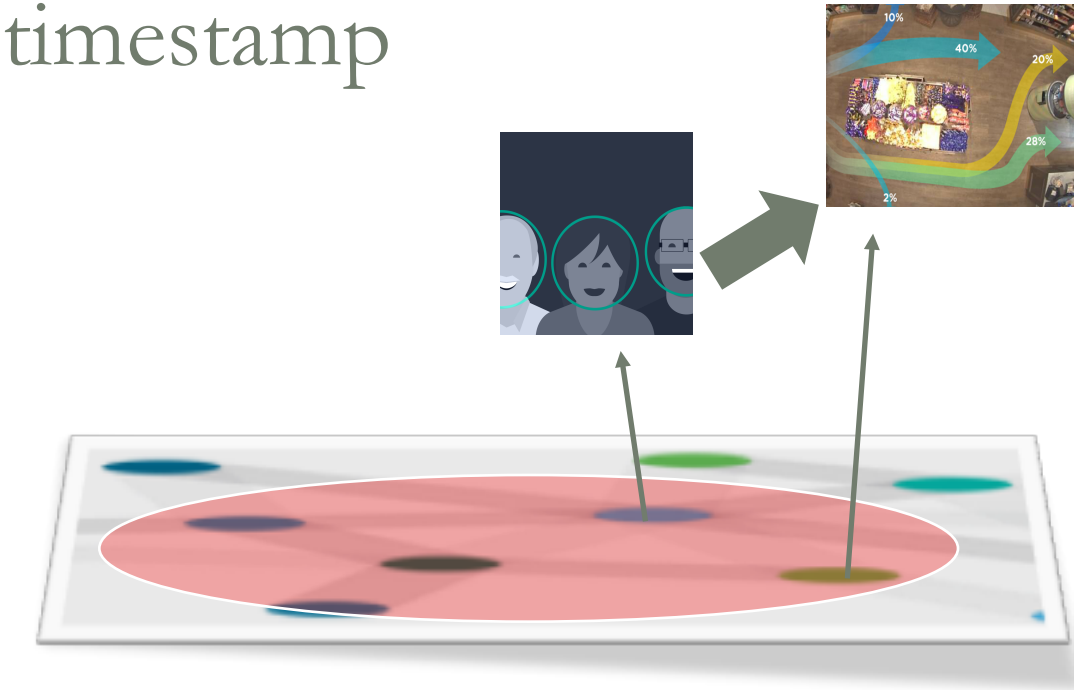
Kl.	man	Tir	ons	tor	fre	lør	søn
10-11	0%	-5%	0%	1%	-21%	-3%	
11-12	19%	5%	3%	1%	5%	-1%	14%
12-13	-23%	-14%	-23%	5%	9%	6%	11%
13-14	1%	9%	-16%	21%	-8%	4%	5%
14-15	12%	-2%	13%	3%	-1%	2%	14%
15-16	-16%	-18%	-2%	0%	5%	-6%	
16-17	-6%	0%	-11%	-3%	-7%		
17-18	-9%	-1%	11%	23%	-7%		
18-19	-7%	11%	-7%	7%	-4%		
19-20	-8%	-14%	-2%	-17%	-3%		





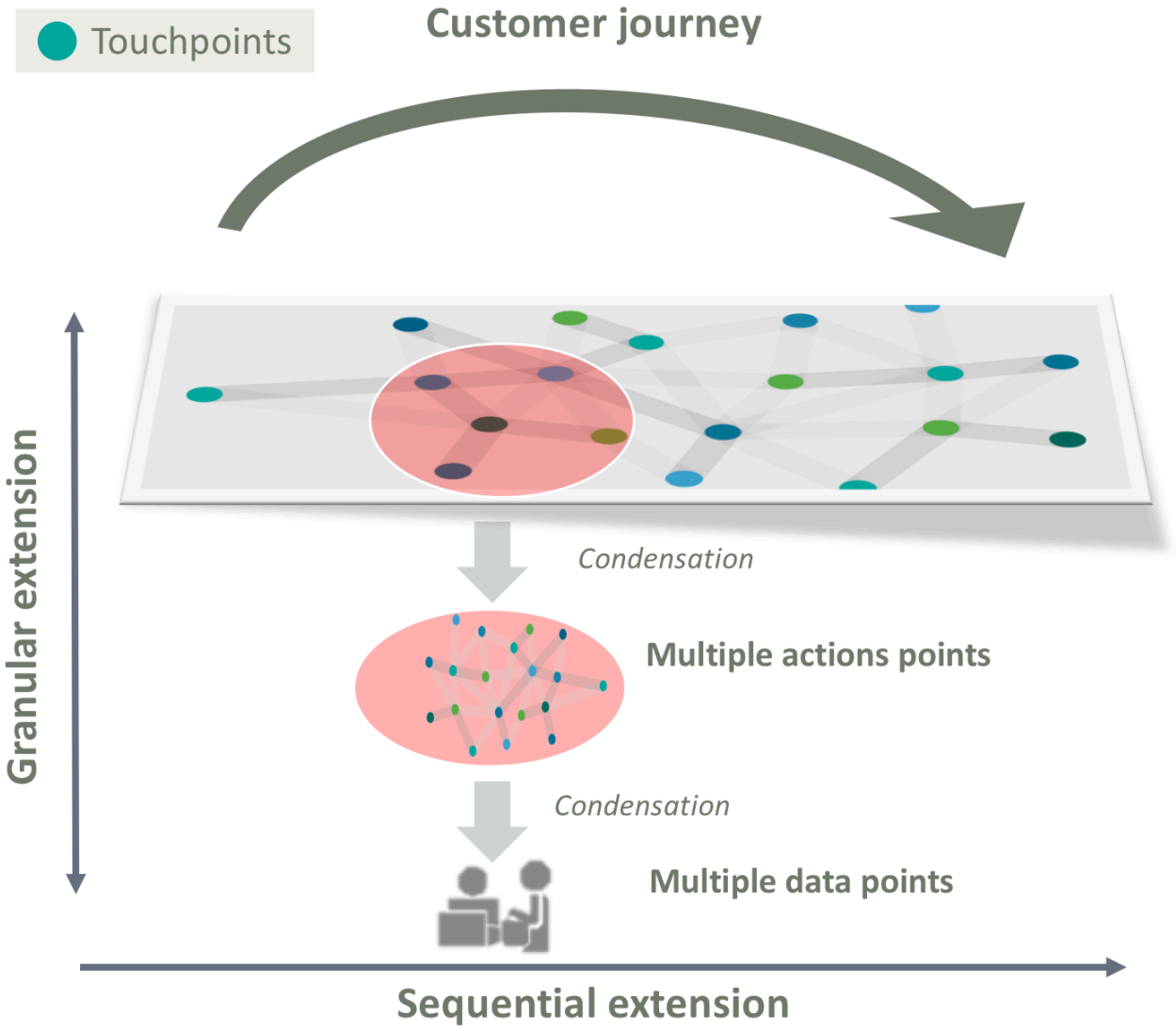
We then connected a data source onto this persona based on behaviour or segmental characteristics. The data source in this case is data from a face recognition camera which identifies customers' sex and age upon entering. These characteristics are part of the persona, and hence it is possible to trace when specific personas e.g. enters the shop.

Step 3: Estimated linking through timestamp



However, instead of ending the analysis with this data we extend the descriptions of the personas journeys by adding yet another data source based on the same characteristics. In this given example we construct a temporal link from a face recognition camera at the entrance with the 360° camera of the store tracing the customers path through the store. Through comparing timestamps of the two datasets (temporal linking), we can not only get insights of different paths through the store – we also gain knowledge on how these paths differs between different personas.

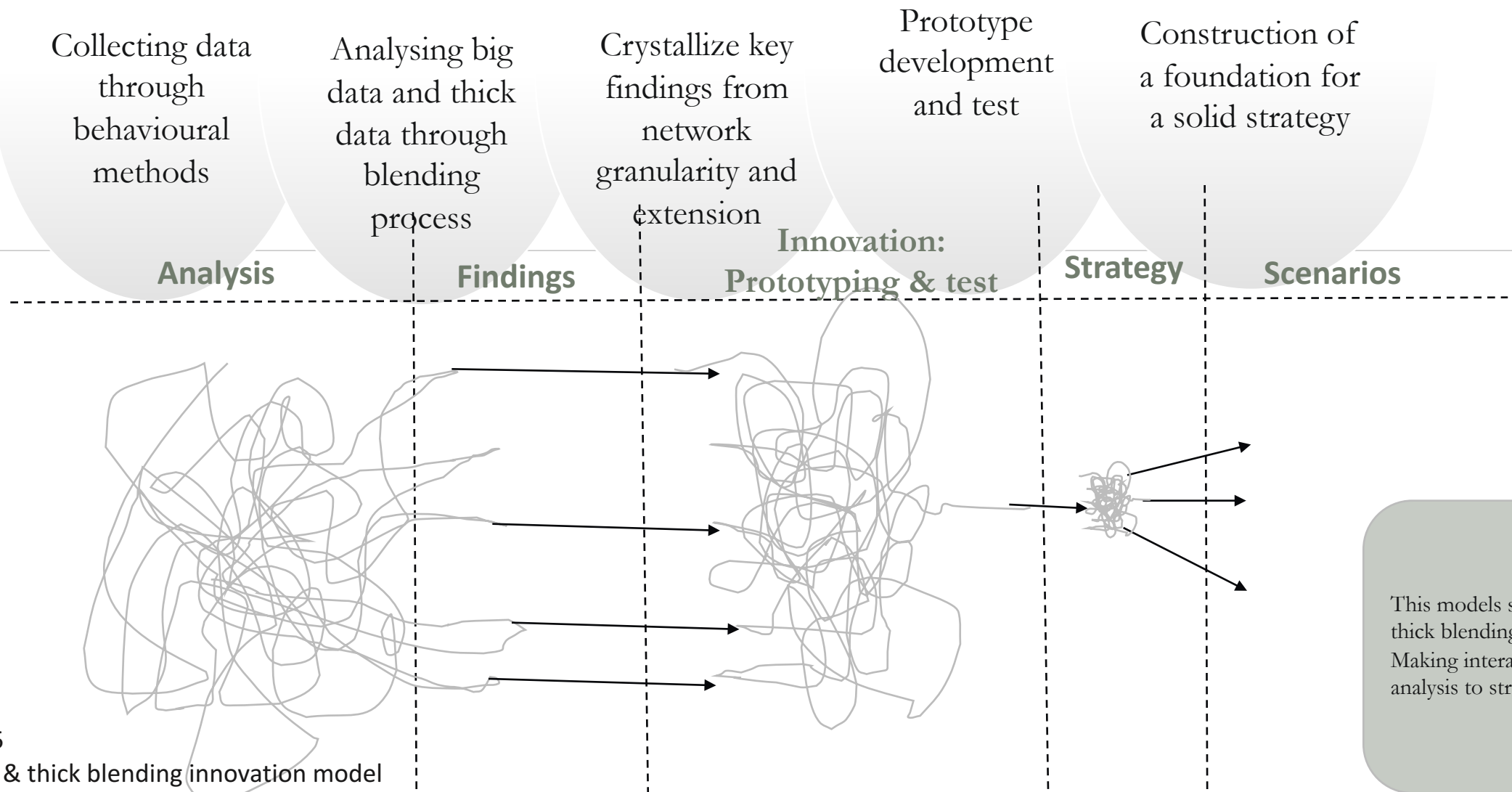
Summing up:
A theory of BIG THICK BLENDING



Behavioural methods
+
Network Granularity
+
Network Extension
+
Big thick blending
=
New important findings
→ Innovation →strategy

Summing up, the big thick blending methodology is about working within a rhizomatic network-theory, focusing at the same time on both the two-sided granular process of zooming in and out, and on the sequential process of combining findings across the network as it is extended. Doing all this, the methodology focuses on the customer, his journey and the critical touchpoints, and on that basis the method may lead to innovation.

Solid analytically based strategic decision-making.



This models shows the overall big thick blending methodology. Making interactive moves from analysis to strategy development.

Figure 5
The big & thick blending innovation model

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