Knowledge Maturing at Workplaces of Knowledge Workers: Results of an Ethnographically Informed Study

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http://mature-ip.eu

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Agenda

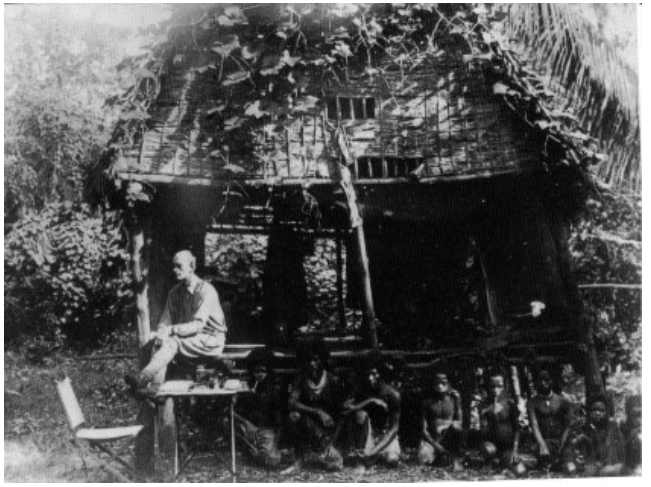
1. Goals
2. Ethnography
3. Personas
4. Results & Conclusion

Workplace Studies of Knowledge Work

- ***System design*** with anthropological argument that human action is constantly (re-) constructed from dynamic interactions with material and social worlds. *Suchman 1987*
- ***lack of workplace studies***, generally in organization science and information systems *Barley/Kunda 2001*
- Example result: four ***informing practices*** ex-pressing, translating, monitoring, networking *Schultze 2000*
- goals:
  - to investigate workplaces of knowledge workers in order to inform IS design and
  - to learn about how Personas can be applied for user-centered design activities

Ethnography

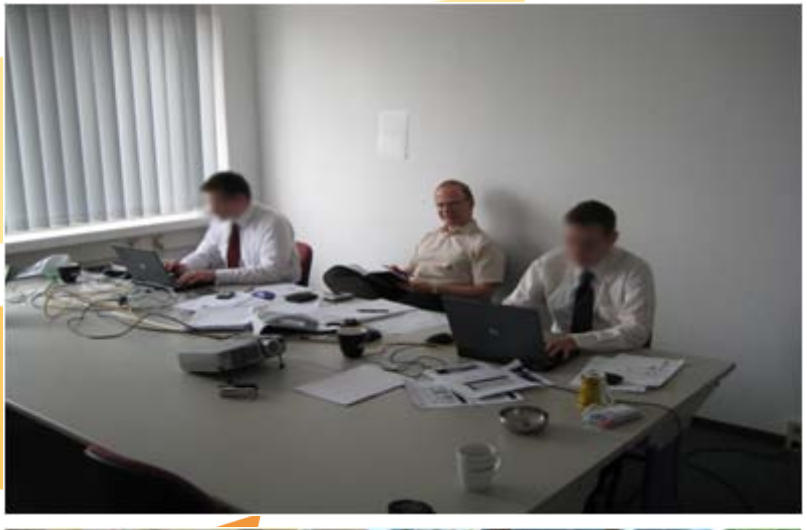
- investigation of the ***state-of-practice*** at MATURE partner organizations from knowledge maturing perspective
- in contrast to field observation describing ***what happens***, ethnography focuses also on ***why and how***
- researcher tries to become a ***member*** of ***community***
- ***ethnography*** becomes more ***popular*** in other disciplines, e.g., in computer science ethnography is key approach for designing CSCW-systems *Harper 2000*
- but: ethnographical studies are too ***time-intensive, costly and unfocused*** for fast changing world of IS
- modified versions, ***rapid ethnography***, seem to be more suitable *Millen 2000*



Studied Organizations

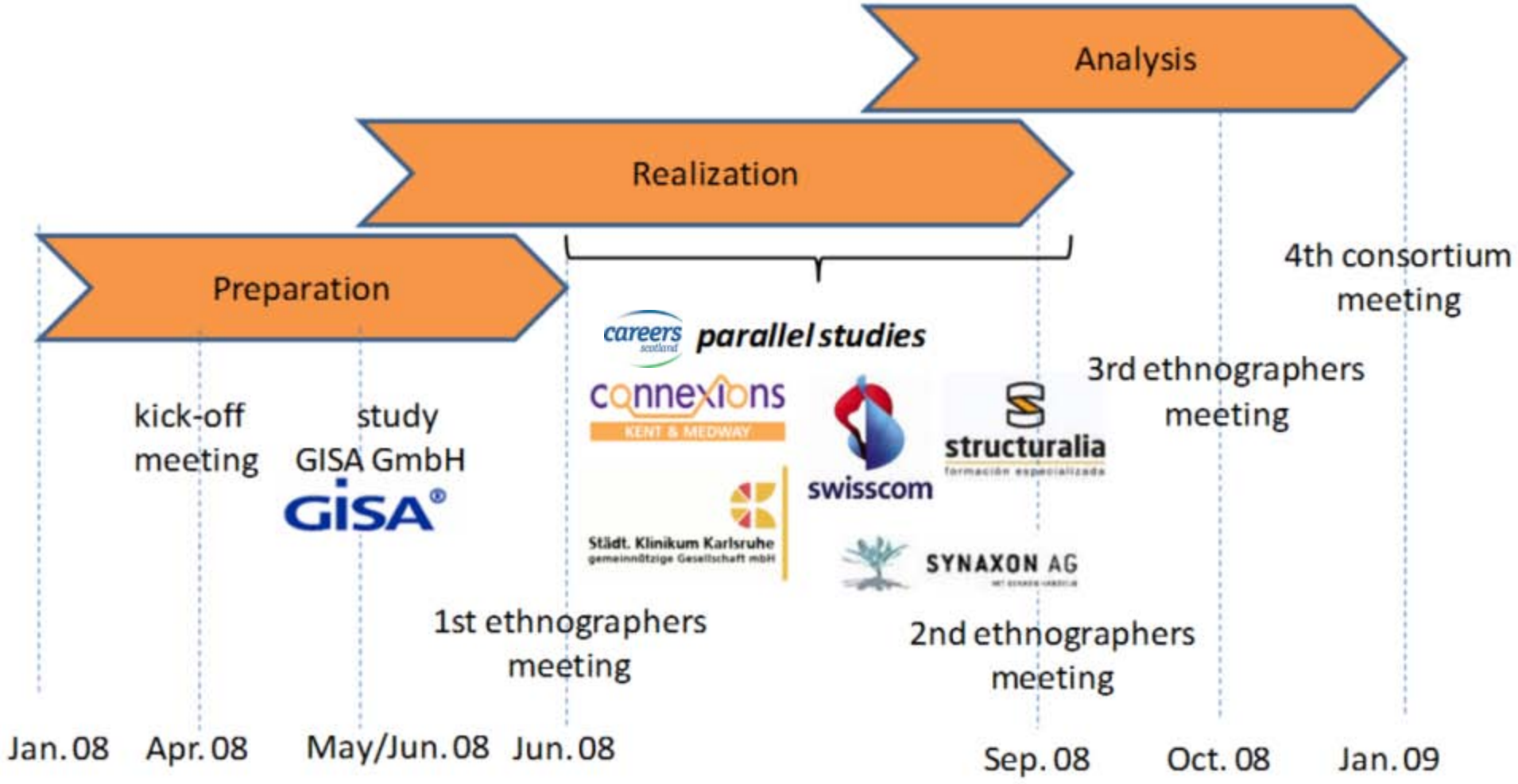
organization	size (employees)	sector	IT intensity	country
Careers Scotland	large (>1,000 employees)	professional services	medium	United Kingdom
Connexions Kent	large (> 300 employees)	professional services	medium	United Kingdom
GISA GmbH Halle	large (400 employees, in group >10,000)	IT services (group: utilities)	high	Germany
Städtisches Klinikum Karlsruhe	large (4,000 employees)	health care	medium	Germany
Structuralia	small (30 employees)	professional services	medium	Spain
Swisscom	large (20,000 employees)	telecommunication	high	Switzerland
Synaxon AG	medium (130 employees)	IT	high	Germany

Study at Gisa Halle (UIBK)



Sector:	IT services (utilities), app. 400 employees
Studied cases:	portal development, DWH consultancy at the client, software development
Ethnographers:	Andreas Kaschig, Ronald Maier, Stefan Thalmann
Time frame:	19.05-23.05 and 16.06-20.06
# of closely studied persons:	8 persons
# of interviews:	6
Identified personas:	Sally, Igor, Aisha
process instances:	new solution development (portal), idea management, adoption of ESOA, creation of system proposal (business blueprint)

Timeline


Analysis
Realization
Preparation
careers scotland
parallel studies
connexions
KENT & MEDWAY
swisscom
structuralia
formación especializada
Städt. Klinikum Karlsruhe
gemeinnützige Gesellschaft mbH
SYNAXON AG
kick-off meeting
study GISA GmbH
GISA®
1st ethnographers meeting
2nd ethnographers meeting
3rd ethnographers meeting
4th consortium meeting
Jan. 08
Apr. 08
May/Jun. 08
Jun. 08
Sep. 08
Oct. 08
Jan. 09

Personas

- psychology: social role of people in a specific context Storr 1997
- hypothetical archetypes of a described user Cooper 1999
- fictitious, specific, concrete representations of target users Pruitt & Adlin 2006
- large companies have included personas into their software and workflow design processes Pruitt & Adlin 2006
- usually built around goals, we emphasize practices
- work practices: on what people do Blackler, Reed & Whitaker 1993

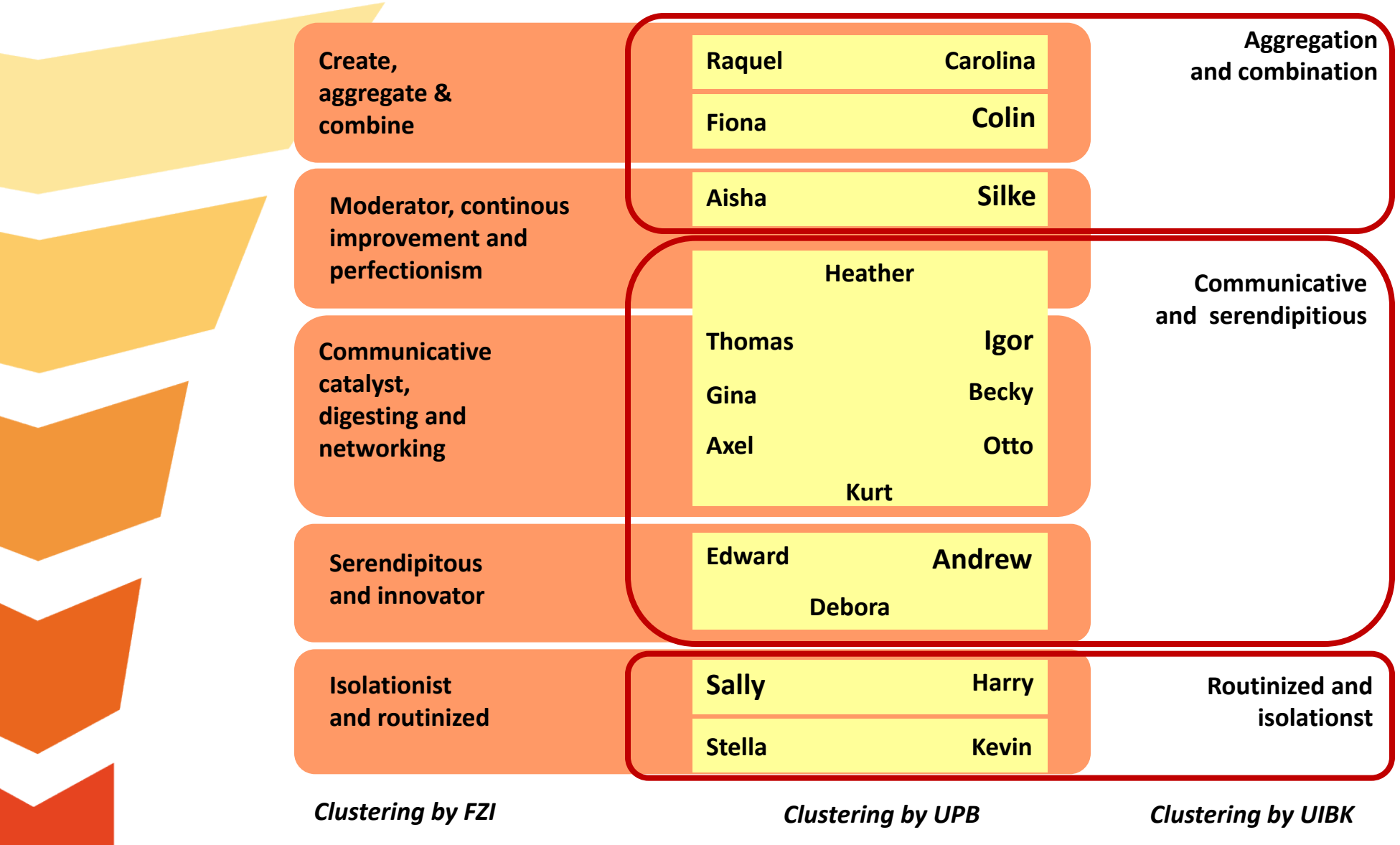
Personas II

- Pro
  - create a unified base for communication
  - rich contextual model of a group of targeted users Aoyama 2006
  - tangible solidity that puts all design assumptions in perspective and aim at ending feature debates
  - programmers can identify with personas Cooper 2004
  - talk much easier about needs and routines of a persona than about abstract requirements Blomquist & Arvola 2002
- Con
  - compete with information about users from many sources Pruitt & Adlin 2006
  - it is difficult or impossible to verify their accuracy Chapman & Milham 2006
  - distinguish between indicative and irrelevant characteristics nearly impossible Chapman & Milham 2006

Characterization of Personas

dimension Pruitt and Adlin 2006	**criterion**
identifying details	name
	motto
roles and tasks	role / degree of standardization
	workplace / colleagues
	task management
skills and knowledge	education and professional background
	learning
	knowledge
	formal trainings
context and environment	***reaction to requests from colleagues***
	communication strategy / approach to knowledge sharing
	content types
	structures
	important tools
goals and motivations	motivation / drives / interests
	problem solving and other knowledge routines
	attitude towards technology

Clustering Personas



Primary Personas

Andrew: serendipitous & innovation

- careers advisor, works in a school helping young people or in central office with laptop “hot-desking”
- likes to learn and is keen to find websites that are a valuable resource for developing his knowledge
- motto: “No idea how I learned that - it just happened!”

Colin: create, aggregate & combine

- specialist in labour market information, works in a small team
- He is very structured, likes applying his knowledge and putting it into practice
- motto: “Everything is learned according to plan!”

Igor: communicative catalyst, digesting & network

- IT consultant, works in several project teams and offices
- he is known all over the place, is well informed about ongoing activities
- motto: “There are no stupid questions, only stupid answers.”

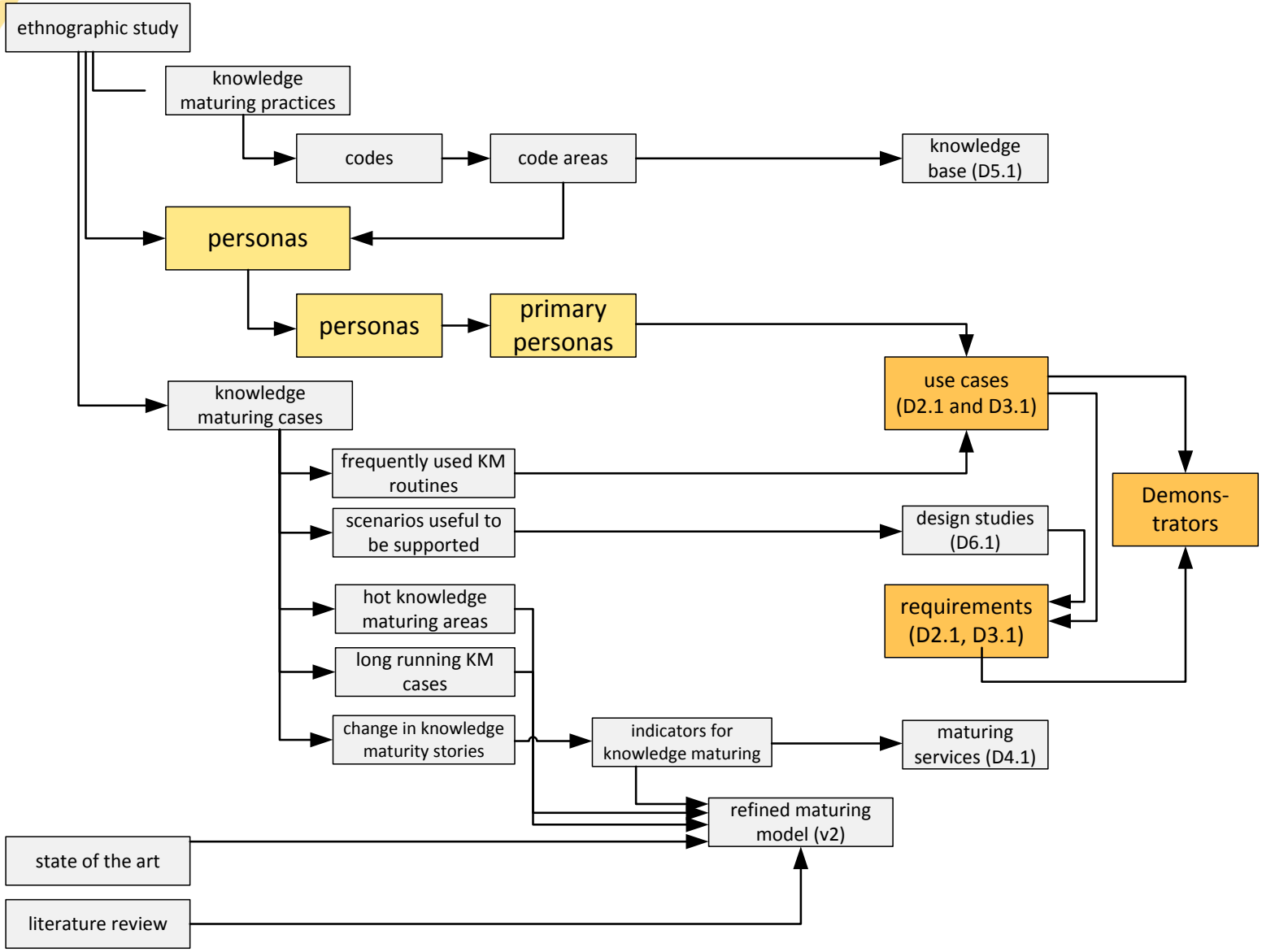
Sally: isolationist & routinized

- system developer, shares office with five co-workers
- dislikes verbal interactions, likes to show solutions directly on the affected systems
- motto: “If I have not seen it working, I do not believe it anyways.”

Silke: moderator, continuous improvement & perfectionism

- responsible for a vocational training program, shares office with three colleagues
- has very high personal standards and is committed to improving her work practice
- motto: “Always well organized.”

Take Up


ethnographic study
knowledge maturing practices
codes
code areas
knowledge base (D5.1)
personas
personas
primary personas
use cases (D2.1 and D3.1)
knowledge maturing cases
frequently used KM routines
scenarios useful to be supported
design studies (D6.1)
Demons-trators
hot knowledge maturing areas
requirements (D2.1, D3.1)
long running KM cases
change in knowledge maturity stories
indicators for knowledge maturing
maturing services (D4.1)
refined maturing model (v2)
state of the art
literature review

Conclusions

- workplace studies are needed to investigate knowledge work and elicit contextual factors of IS usage
- Personas seem well suited for user-centered design
- Personas enable team members to share a specific, consistent understanding
- Personas provide a human „face“ to support empathy on people
- Personas stress the importance of being aware and master complexity of diverse styles of learning and handling knowledge
- groups identified with their Personas:
  - “Igor would never do that, he would rather …”
  - “Sally would think this is great, because …”
  - “Silke just would not find that useful in her way of organizing things due to …”
- initial assumption strengthened that knowledge work is sufficiently similar across domains and industries