

Unlocking Knowledge Reuse

Through the Use of Checksheets in Volvo Group



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Outline

- Introduction to knowledge management
- How is knowledge reused?
- Thin slicing knowledge into checksheets with examples
- Organizing knowledge management
- Using questions to create pull for knowledge flow (EXTRA)
- Concluding advice

Introduction to Knowledge Management



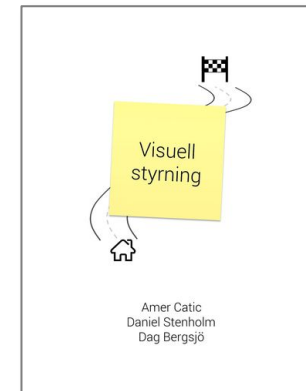
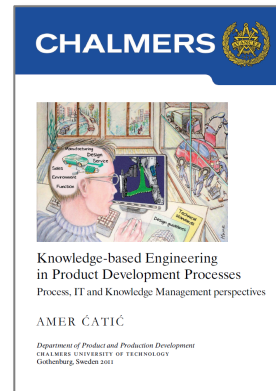
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About me

Amer Catic

- Volvo Group Technology Specialist for Knowledge Management (2011 -)
- Knowledge Management Implementation Leader (2012 -)
- PhD: Knowledge Management in Product Development (2011)



**Visual Management
(in Swedish)**

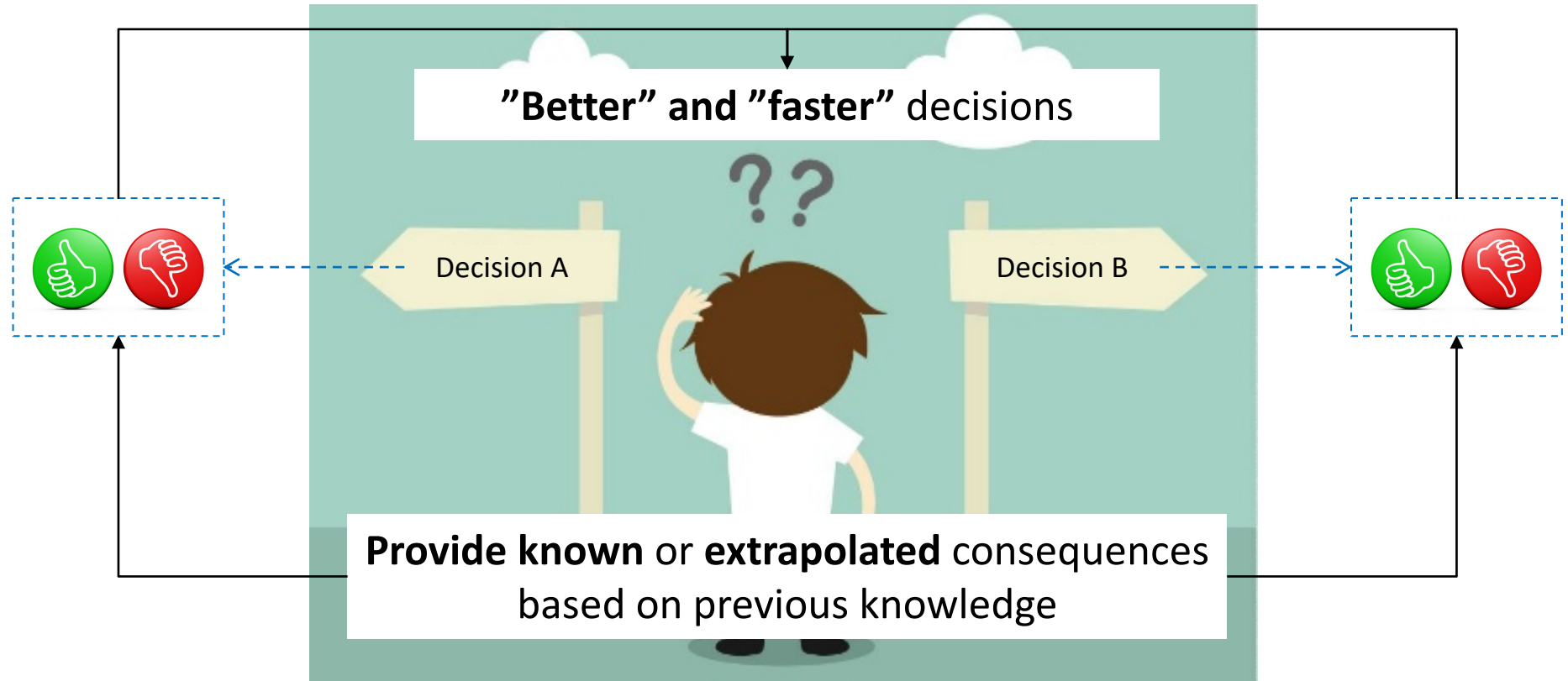
Exercise

1. Think of a topic (like a hobby or interest you have in life)
→ something you are good at
2. Pair up with someone
3. Share knowledge regarding this topic for 2-3 minutes
4. Switch

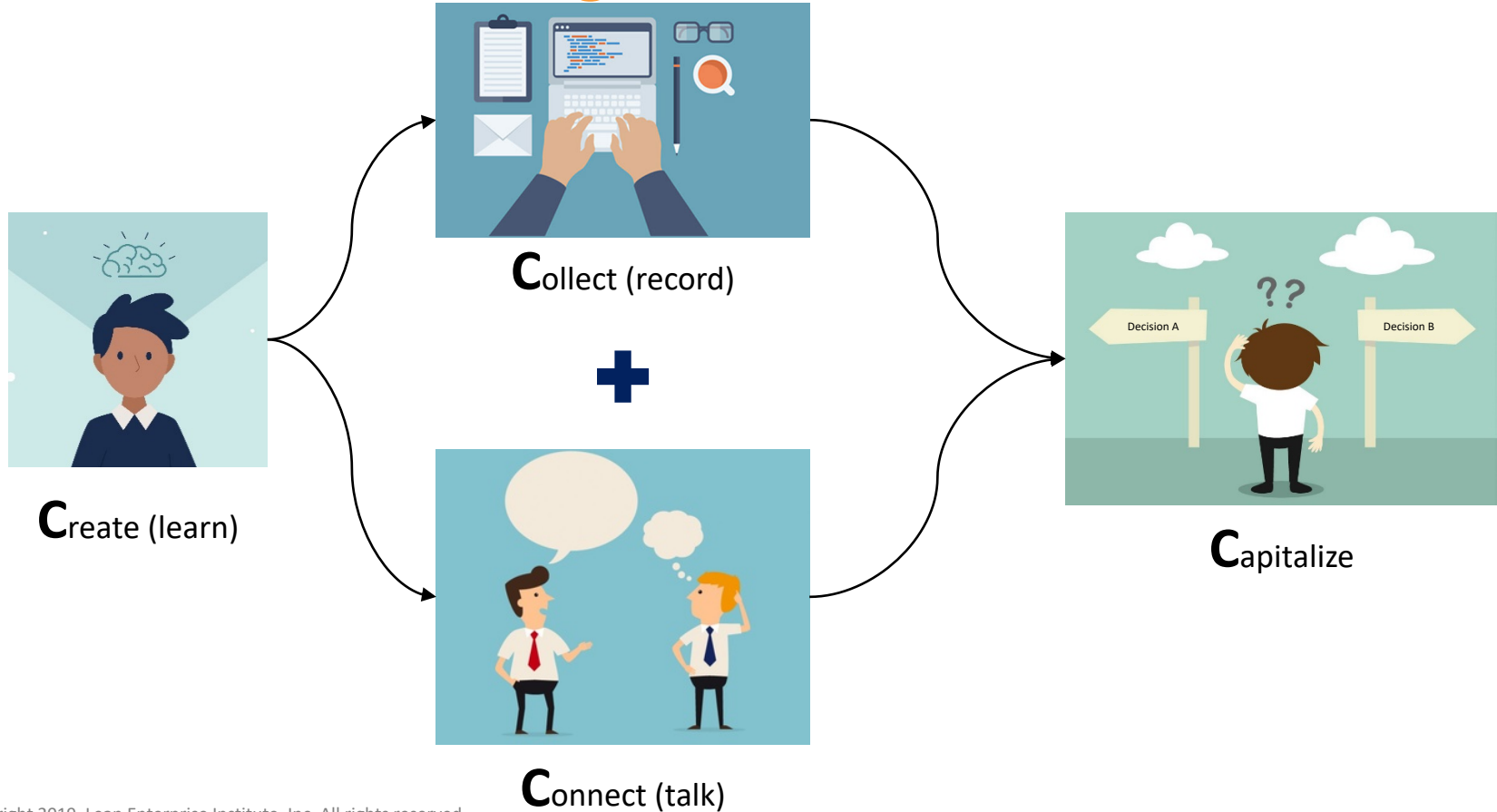
The typical knowledge management journey



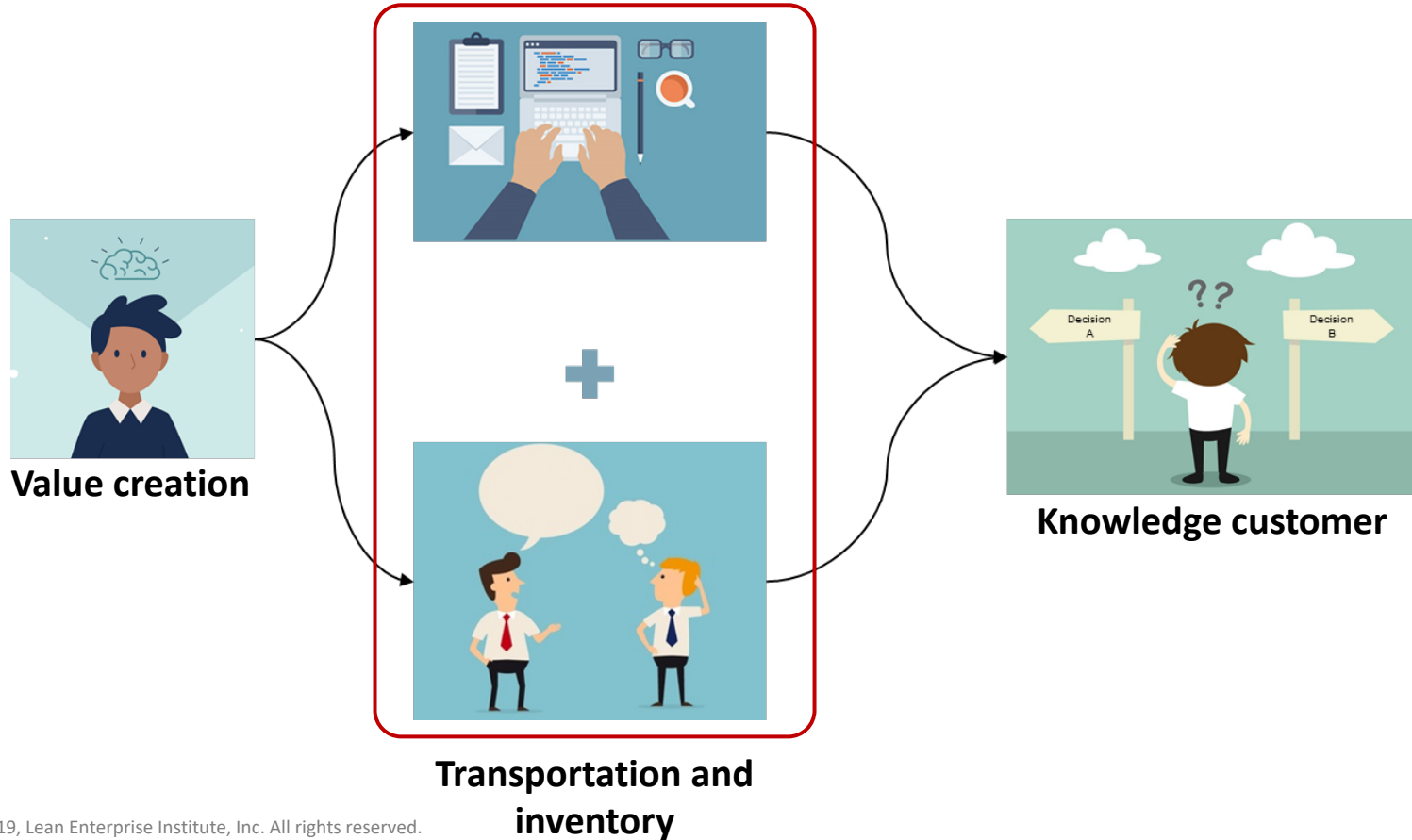
Purpose of knowledge management



The 4 Cs of Knowledge Flow



Let's apply some lean thinking to this...



How is knowledge reused?

- Understanding the customer



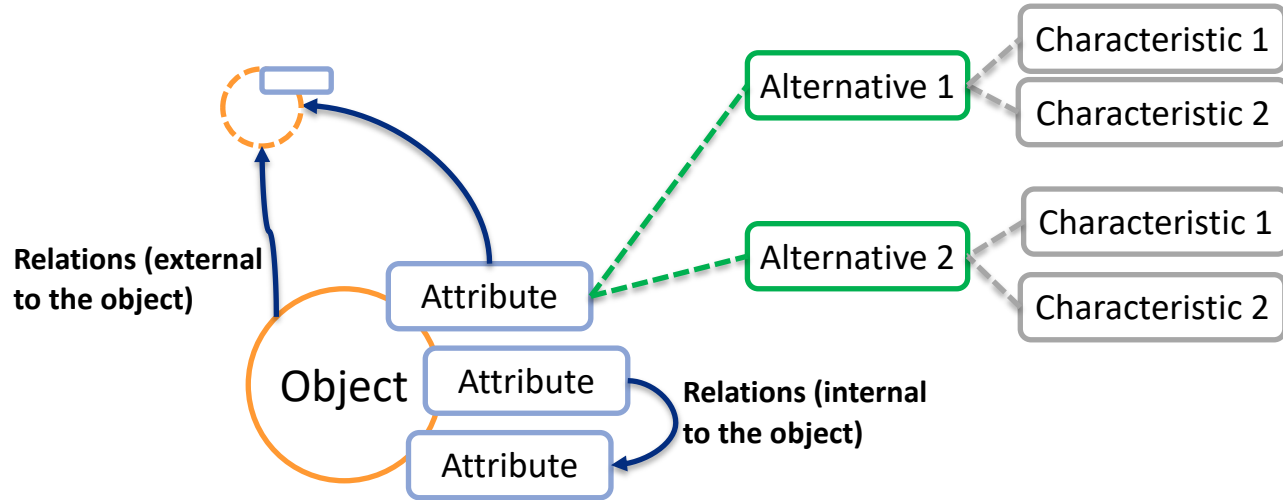
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Exercise

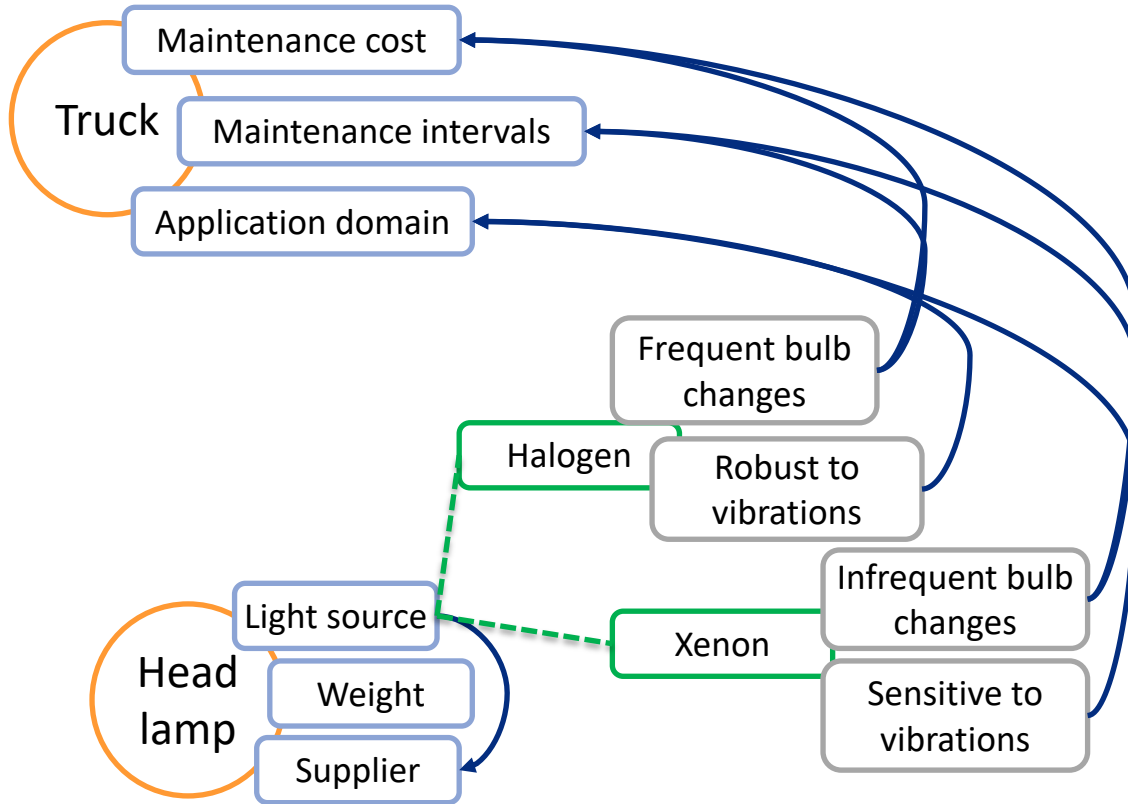
1. Think of a topic (like a hobby or interest you have in life)
→ something you are good at
2. Pair up
3. Give **advice** to your neighbor on one of the first things they **should be** do or learn on to get a good start in this topic (like selecting equipment, choosing time or location, understanding the basics)
4. Switch

Decision-making: a simplified model



Making a decision means selecting an alternative that conceptualizes an objects attribute

Decision-making: a simplified model (OAR)



Having knowledge means being aware of nodes and/or relations

→ Each person has their unique OAR in a domain

Learning means that nodes/relations are added to the model

Knowledge is typically added in small increments = thin slices

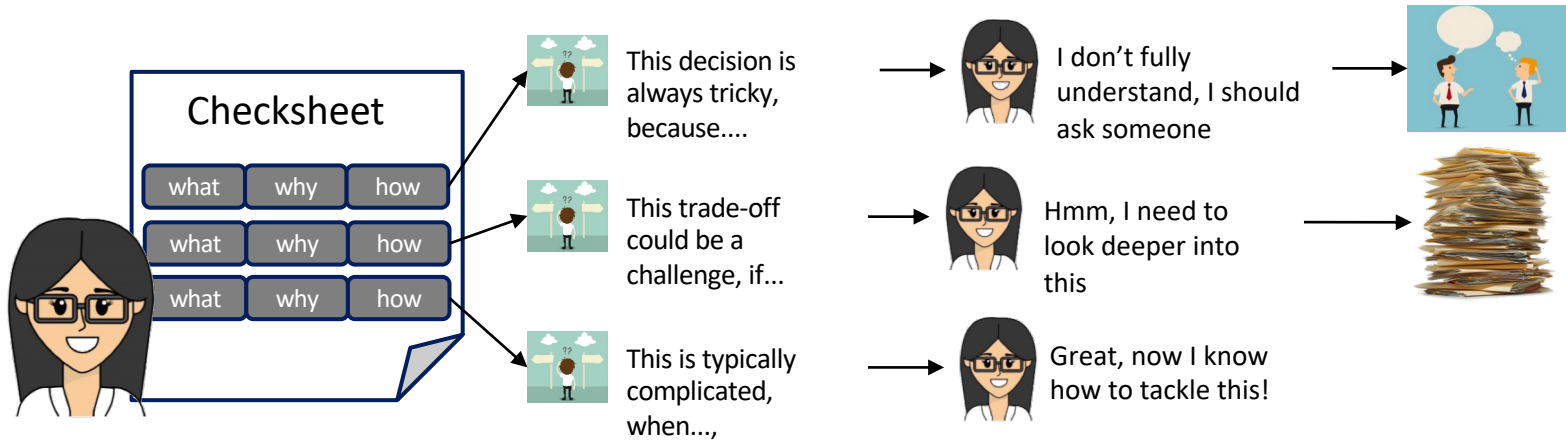
Thin slicing knowledge into checksheets



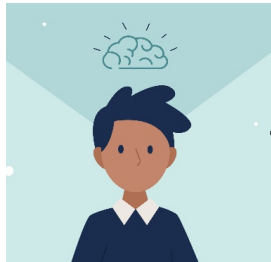
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The basic format and purposes of reusable knowledge



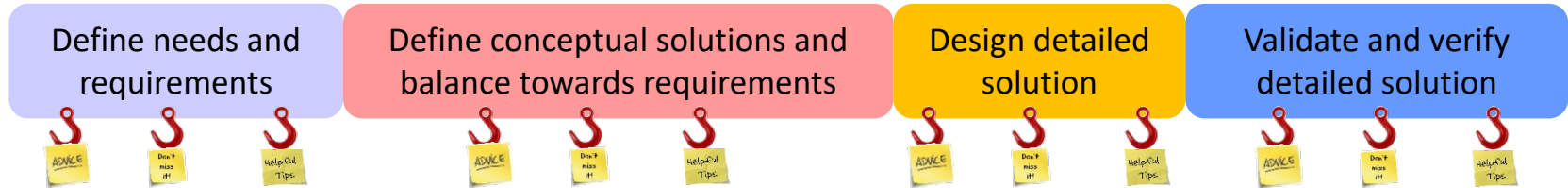
Examples of thin slices



	<i>Know-what</i>	<i>Know-why</i>	<i>Know-how</i>
 <p>Headlamp design</p>	To reduce risk of condensation	Because condensation causes a poor quality impression	To include ventilation holes and certain rules for their placement
 <p>Maneuverability optimisation</p>	To guide among different approaches for validating maneuverability in early phases	Because it can save time in projects and helps in validation planning	Pro's and con's of different methods
 <p>Telematics system design</p>	To check if the right sensors are available for calculation of telematic data	Because assumptions have caused delays and cost increases in prior projects	Which information to check or who to contact and what to ask for

Additional way to add context

→ connect to (rough) development phases



Don't overdo the development process connection!

→ it will result in a checksheet focusing on documentation and gate/milestone related deliveries

Checksheet examples

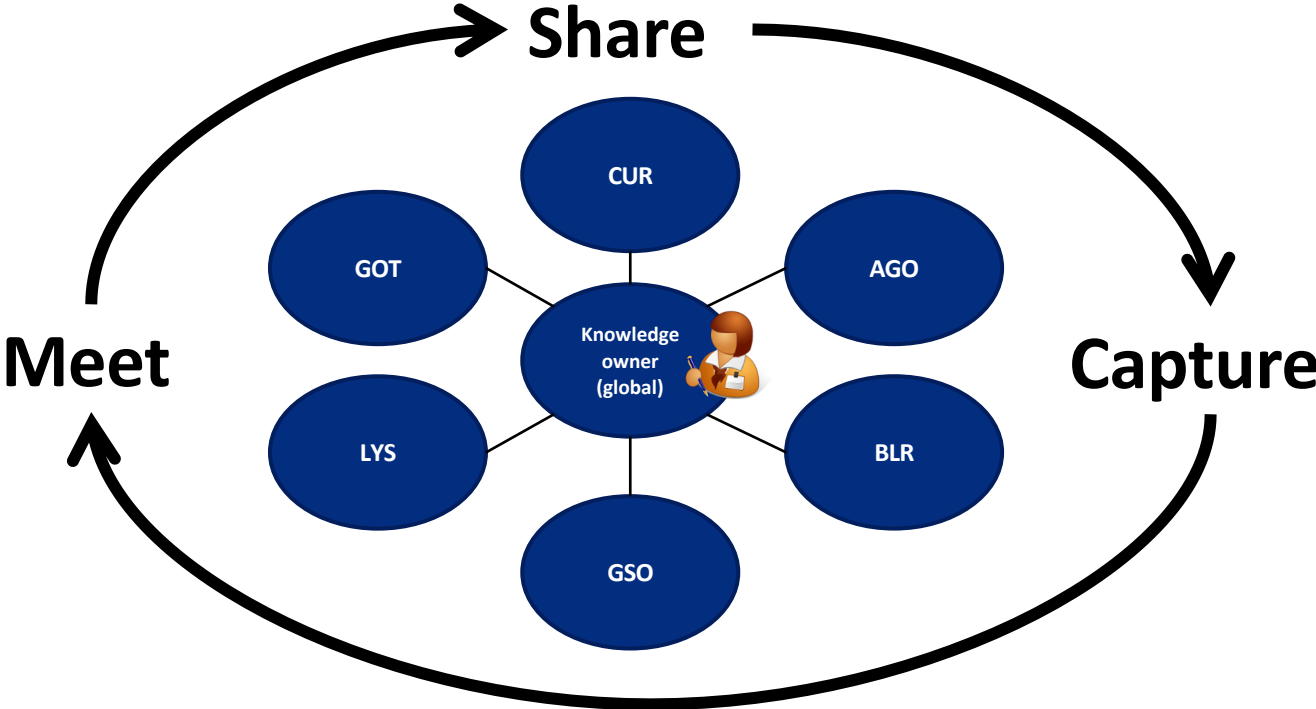
Organizing knowledge management



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Community of Practice



Checksheet
Wiki
Documents

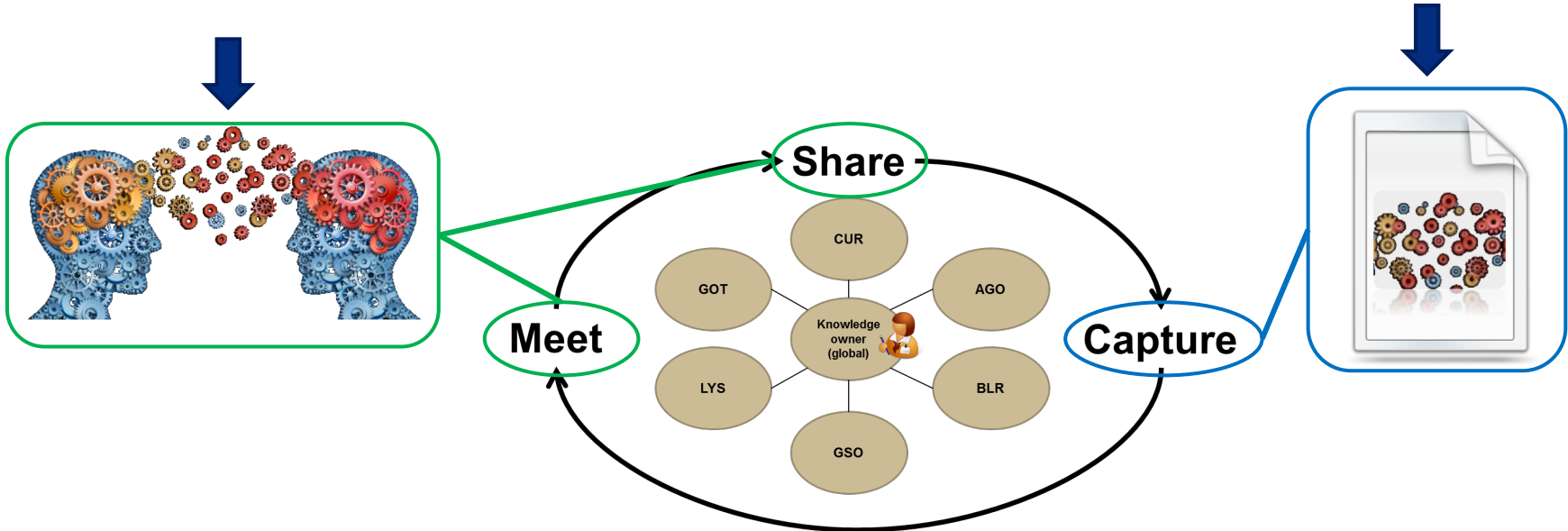
Community Meeting agenda (typical)

X minutes - round the table:

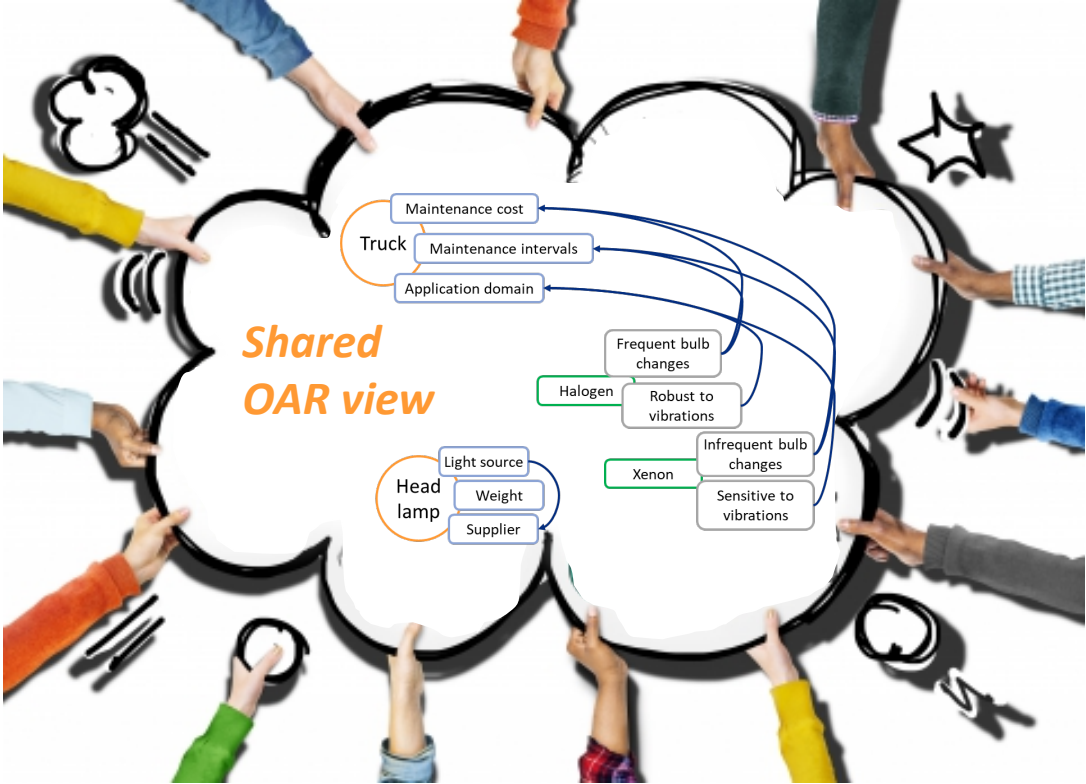
- Share lessons learned from maintenance/projects
- Share feedback from knowledge reuse
- Ask for knowledge from community for a tricky problem in project/maintenance

Y minutes:

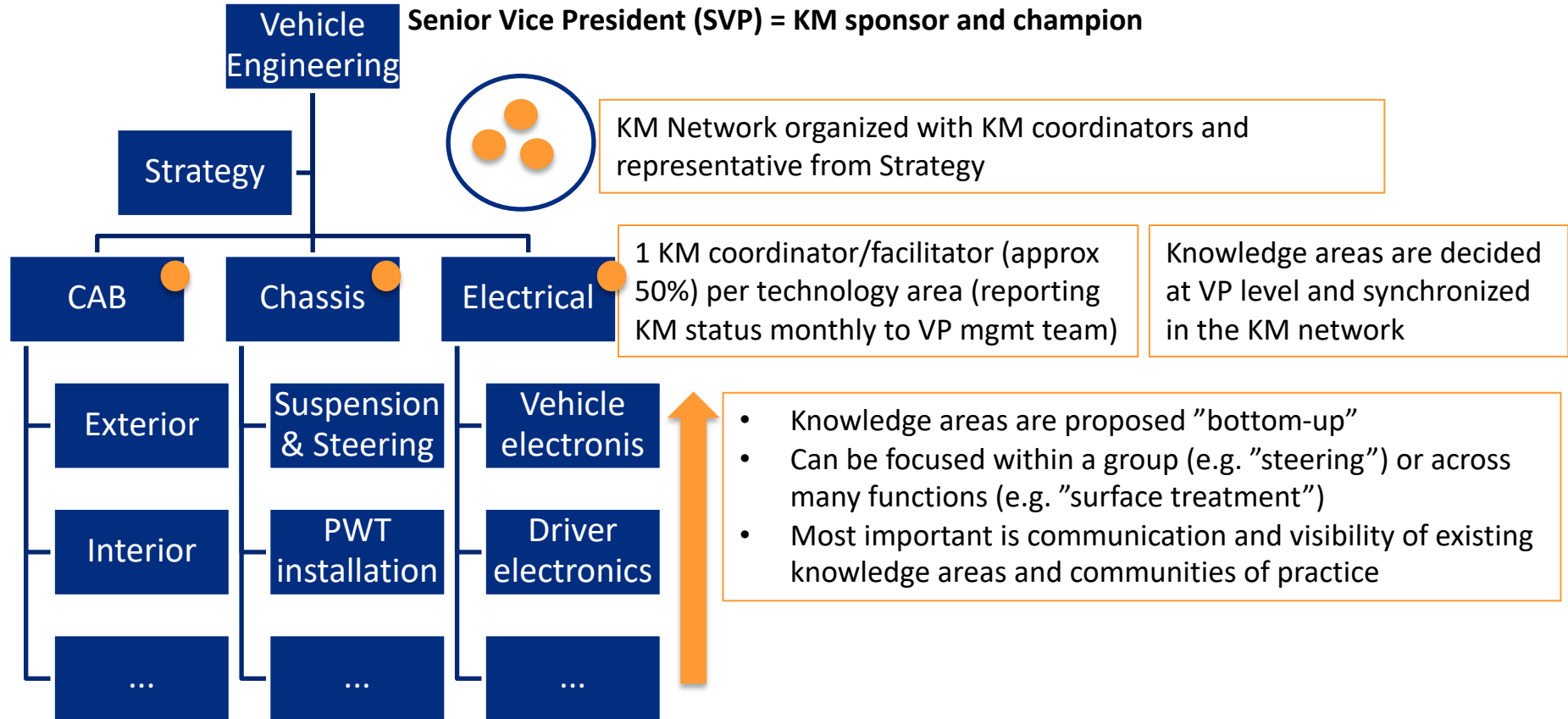
- Propose updates to knowledge base
- Review and discuss previous proposals
- Distribute the work for updating



Community of Practice



Knowledge areas and governance



Using questions to create pull for knowledge flow



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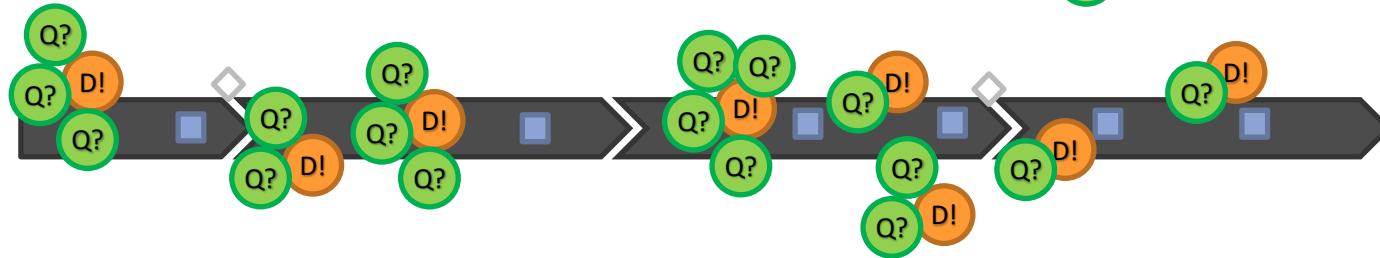
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Exercise

1. You are interested in the topic presented earlier by your neighbor
2. Ask a question about something you wonder about getting started on that topic

Development is....

- ◇ Milestone
- Deliverable
- D! Decision
- Q? Question



Question-asking, decision-making process

To make it more efficient,
we need to visualize the
needs for knowledge



Visual and Question driven-collaboration

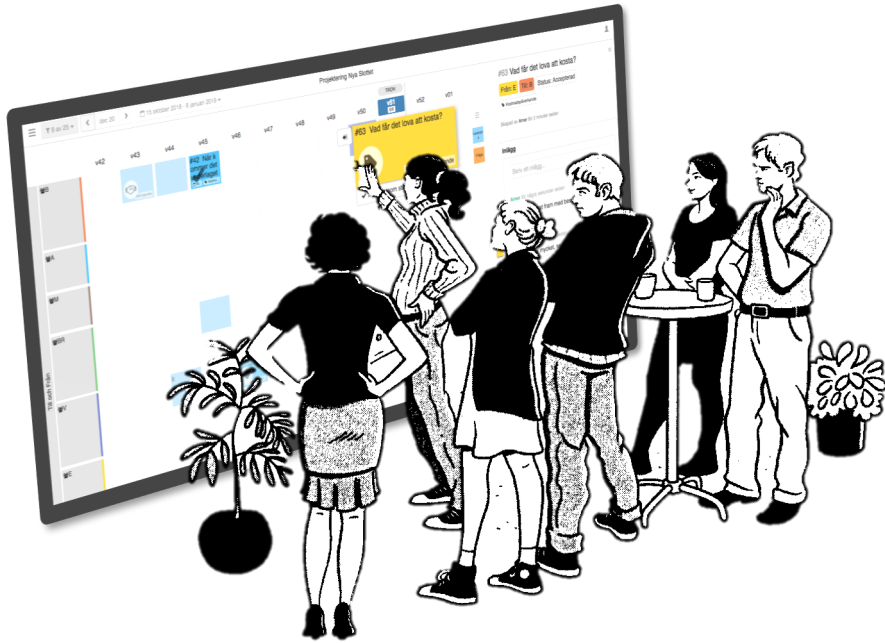


Visual planning
(tasks/deliveries) +
knowledge gaps
(questions)

The screenshot displays a project management interface with two main views: a Gantt chart at the top and a Kanban board below. The Gantt chart, titled 'Projektering', shows a timeline from v50 to v13 with various milestones and tasks. The Kanban board, titled 'Projektering Nya Slottet', shows tasks assigned to team members (A, B, K, E, V, VVS) across various stages (v42 to v01). A pop-up window for task #63 is visible, showing a question '63 Vad får det lova att kosta?' with a status of 'Accepterad' and a cost tag icon.

Question-driven
collaboration from Swedish
construction industry

Way of working



Daily (or weekly) stand-up

Meeting leader = moderator

Focus on decisions and questions

Driven by deliveries/milestones

Project team context

Purpose: drive collaboration

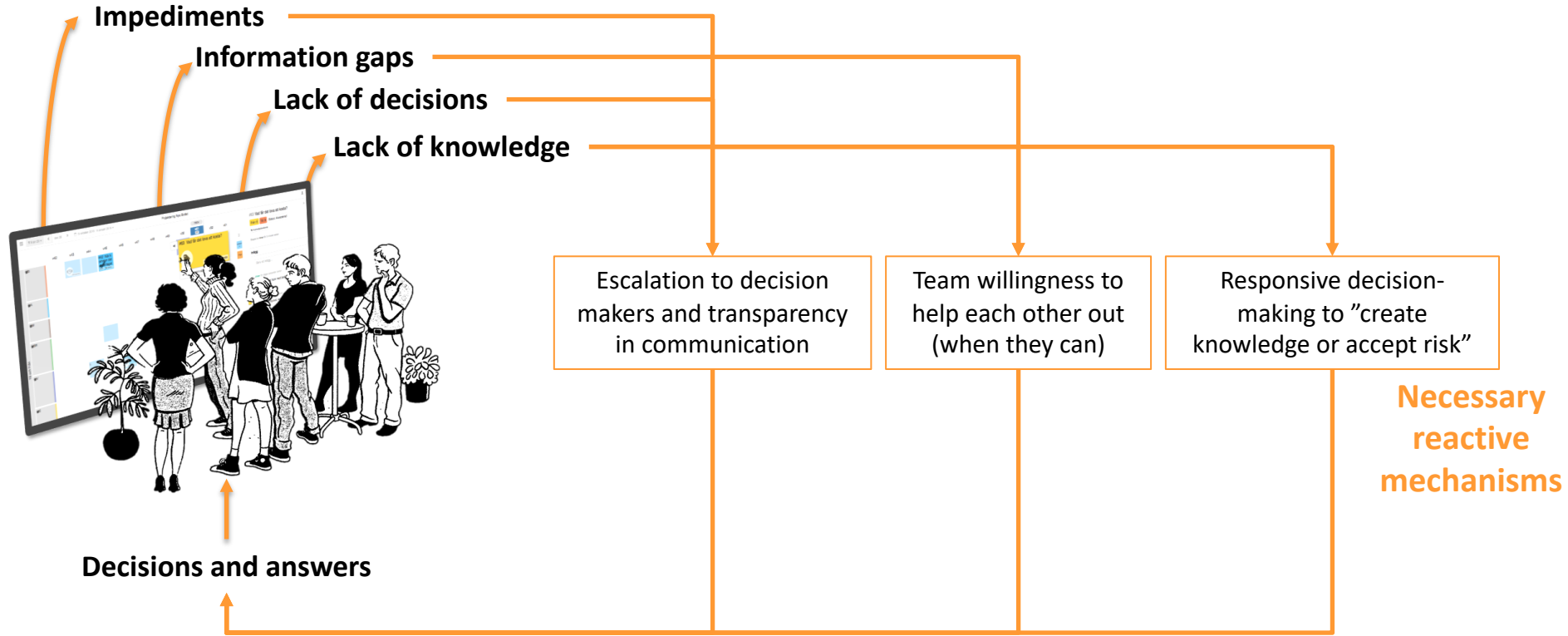
”Expressing expectations more explicitly”

Functional team context

Purpose: drive knowledge sharing

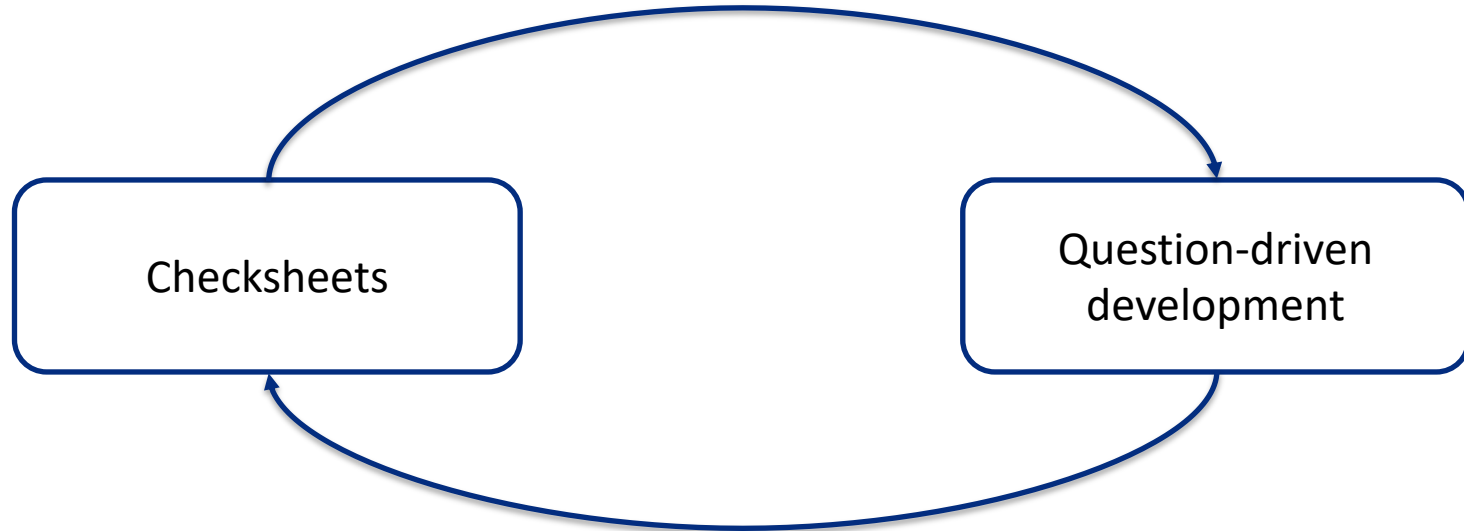
”Colleagues sharing advice”

Things that may show up as "questions"



Interaction between question-driven collaboration and thin-slicing in checksheets

Drive decision making and asking of the "right" questions



Feed checksheets when questions reflect knowledge gaps and their answers new OAR elements

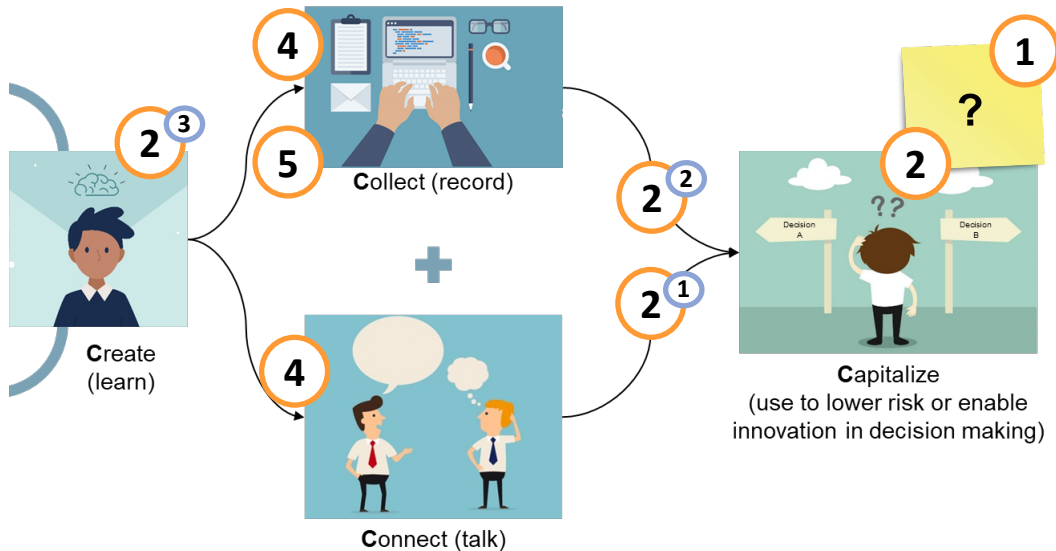
Concluding advice



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Concluding advice



- 1 Make knowledge gaps visible on a visual planning board (stated as a question)
- 2 Try to close identified knowledge gaps in the following order:
 - 1 Connect
 - 2 Collect
 - 3 Create
- 3 Closure of knowledge gaps that requires new knowledge creation should be challenged to be done as cheaply and quickly as possible
- 4 Collect knowledge primarily as thin slices stated as **advice in context** with what, why and how *with reference* to people or deeper sources
- 5 Collect knowledge secondarily in full text descriptions only once the primary thin slices is stated (or connect existing knowledge to thin slices)