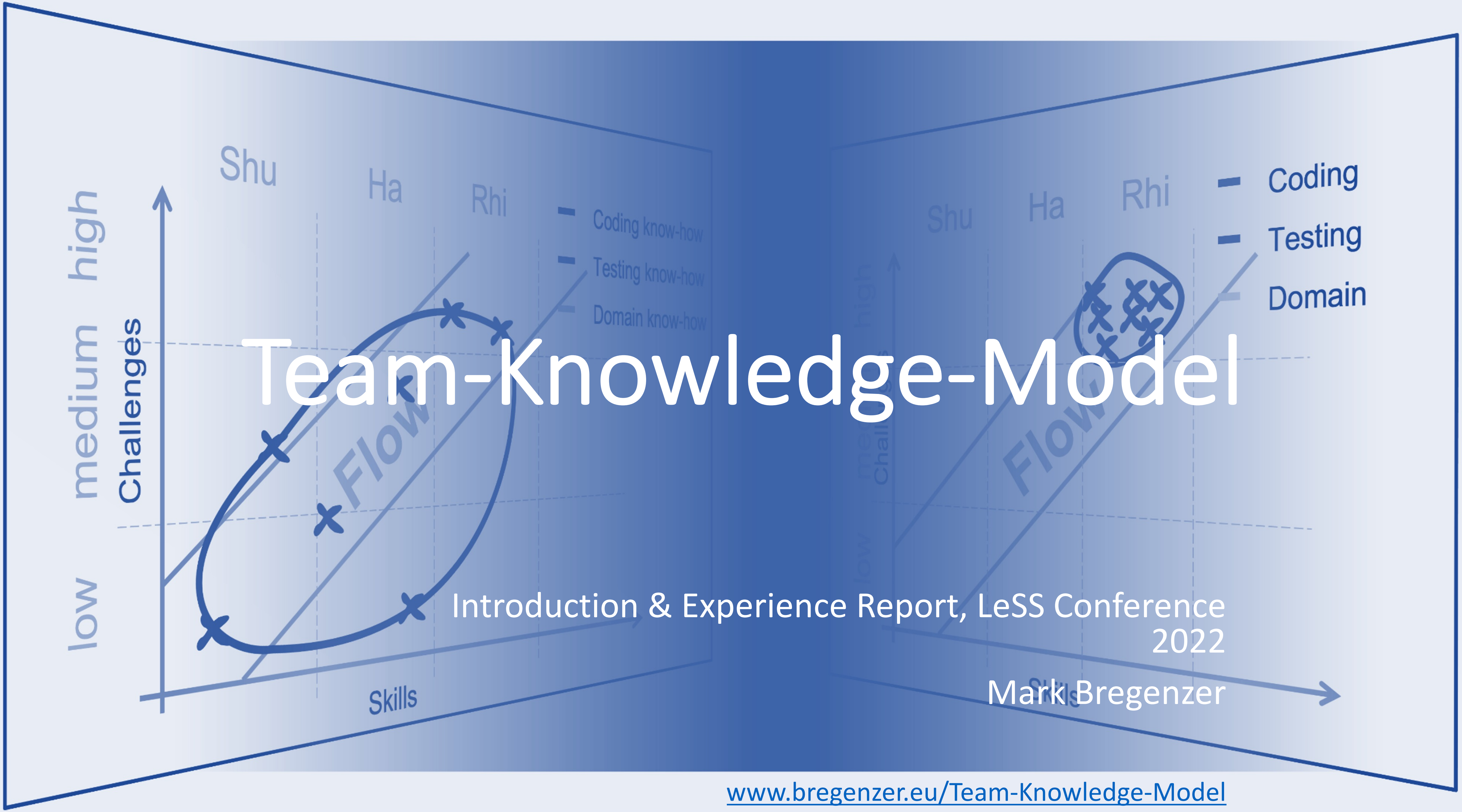
Team-Knowledge-Model

Introduction & Experience Report, LeSS Conference 2022

Mark Bregenzer

www.bregenzer.eu/Team-Knowledge-Model



My Background

Self-employed

Organizational Design Coach, Agile Software Development Scaling Expert

Agile Experience:

- Certified LeSS Trainer 2015
- Scaling Scrum Fundamentals, Scrum Alliance 2015
- Certified LeSS Practitioner 2015
- Certified Scaled Agile Program Consultant 2014
- Agile Coach since 2009, at Valtech since 2011
- Certified Scrum-Master since 2007

Software development Experience:

Since 1997 as developer, lead developer, subproject leader, technical Coach…

Business Areas:

Telecommunication, automotive, insurance, retail and e-commerce

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Agenda

Team-Knowledge-Model Introduction

Motivation, Foundation & Purpose

What is Flow?

The Team-Knowledge-Model

How to…

Experiences

Two Real Life examples
Initial & Follow-up Models
Team Learnings

Tips & Pitfalls

General Learnings on How to Introduce And Use The TKM

Q & A

Team-Knowledge-Model Introduction

Motivation, Foundation & Purpose

High-Performing Teams

How to scale-up the performance of a team?

Improving knowledge and skills.

In addition to the social development of the team.

Ability to Scale is Key For High Performance

Four Team states according to their ability to scale:

- scaling potential
- scaling state
- scaling impediment
- scaling progress

Successful scaling demands continuous know-how and skill building for (all) team members.

A Team is a Learning Community

Members share, dare, and take care of each other…

…and have fun at work!

The Team Owns Its Development Process

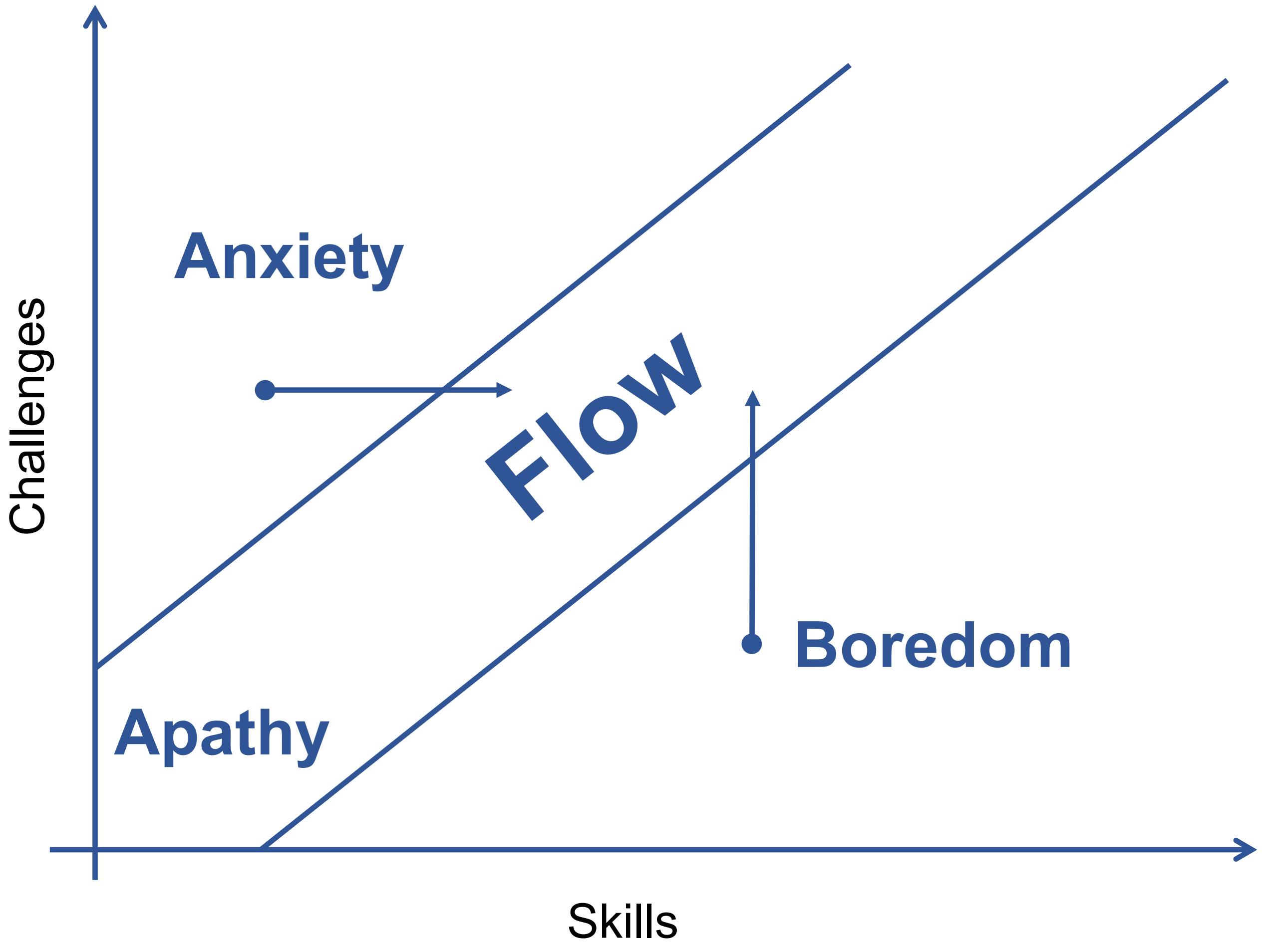
Often facing these questions and challenges:

- How to cope with learning and being productive simultaneously?
- How to see who is the expert, and who needs help?
- How to focus on which direction a team develops?
- How to combine individual and team targets?

**The Team Knowledge Model, based on the “Flow Model”,
can deliver some answers.**

The Flow Model

The Flow Model(Mihály Csikszentmihalyi)



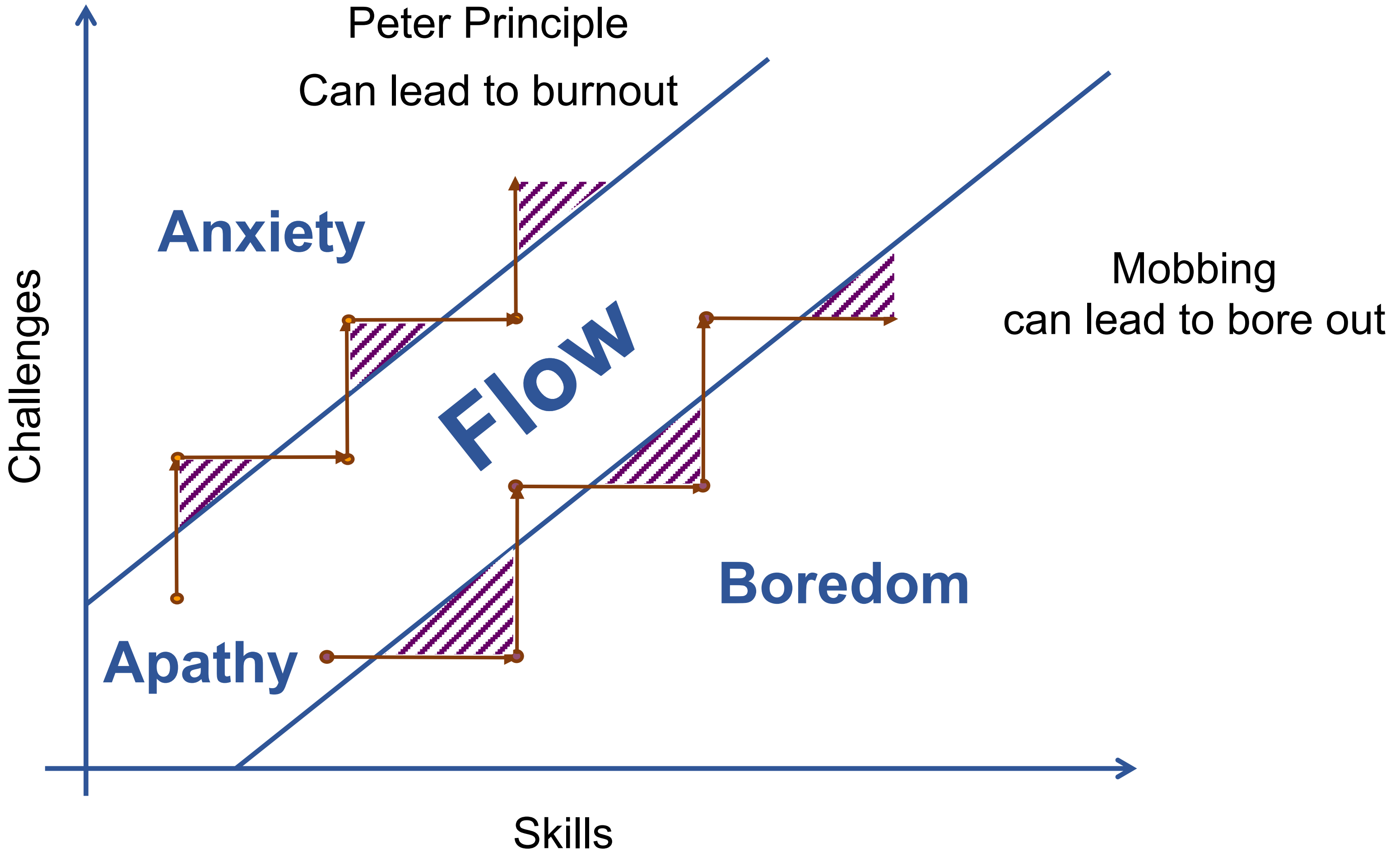
…what is the flow?

The flow in the world of working means the balance between requirements/challenges and skills.

You are in the flow, if you can say:

I’ve got interesting and challenging work.
I’m working smoothly with unbroken continuity,
as in the manner characteristic of a fluid!

Learning at the edge of the flow (Joseph Pelrine)



The Team-Knowledge-Model (TKM)

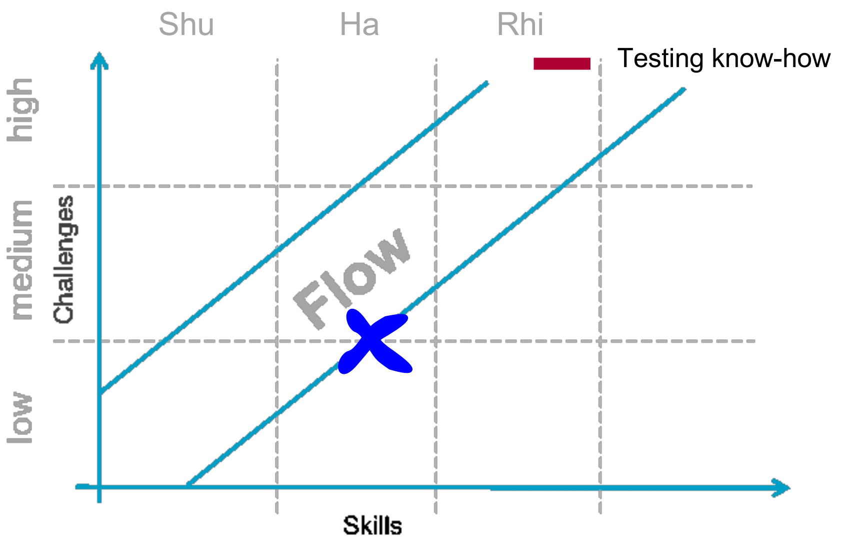
Tracking Velocity is Not Enough!

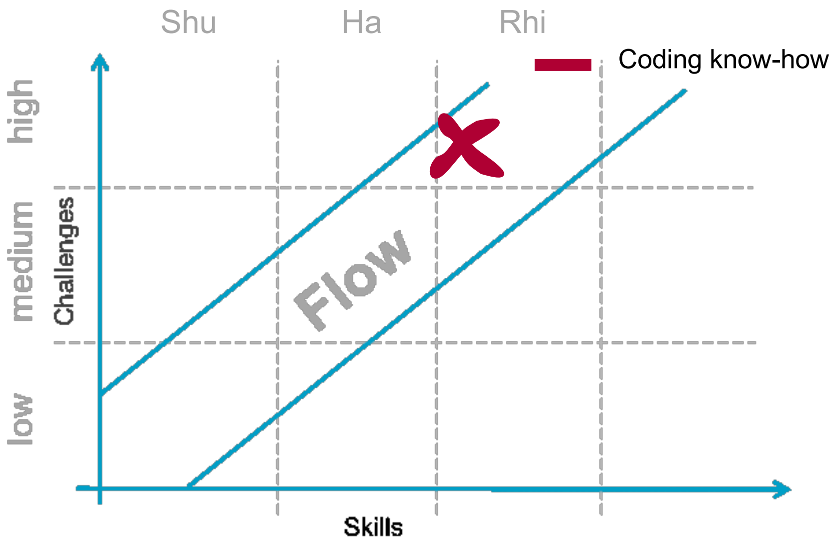
The Team Knowledge Model visualizes…

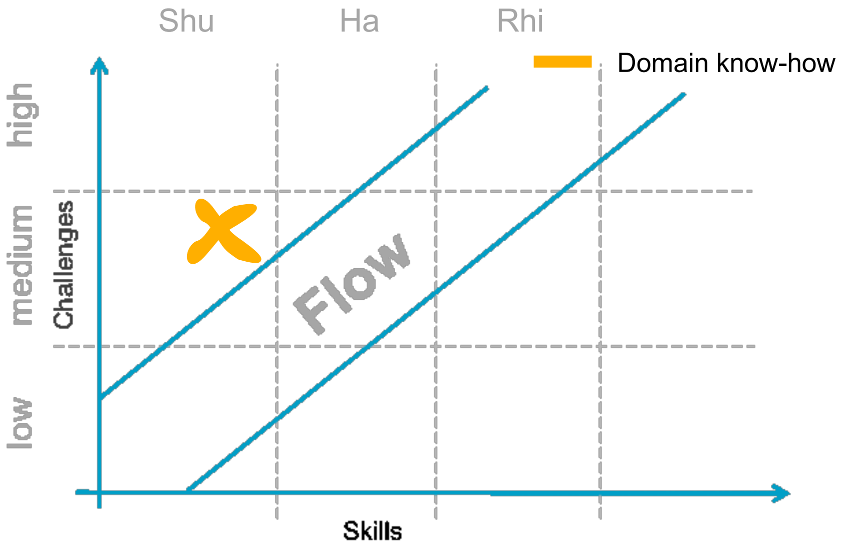
- the knowledge distribution within the team (scaling potential)
- balance of challenges and skills (scaling state)
- lack of knowledge in the team (scaling impediment)
- knowledge development over time (scaling progress)

TKM: How to Start

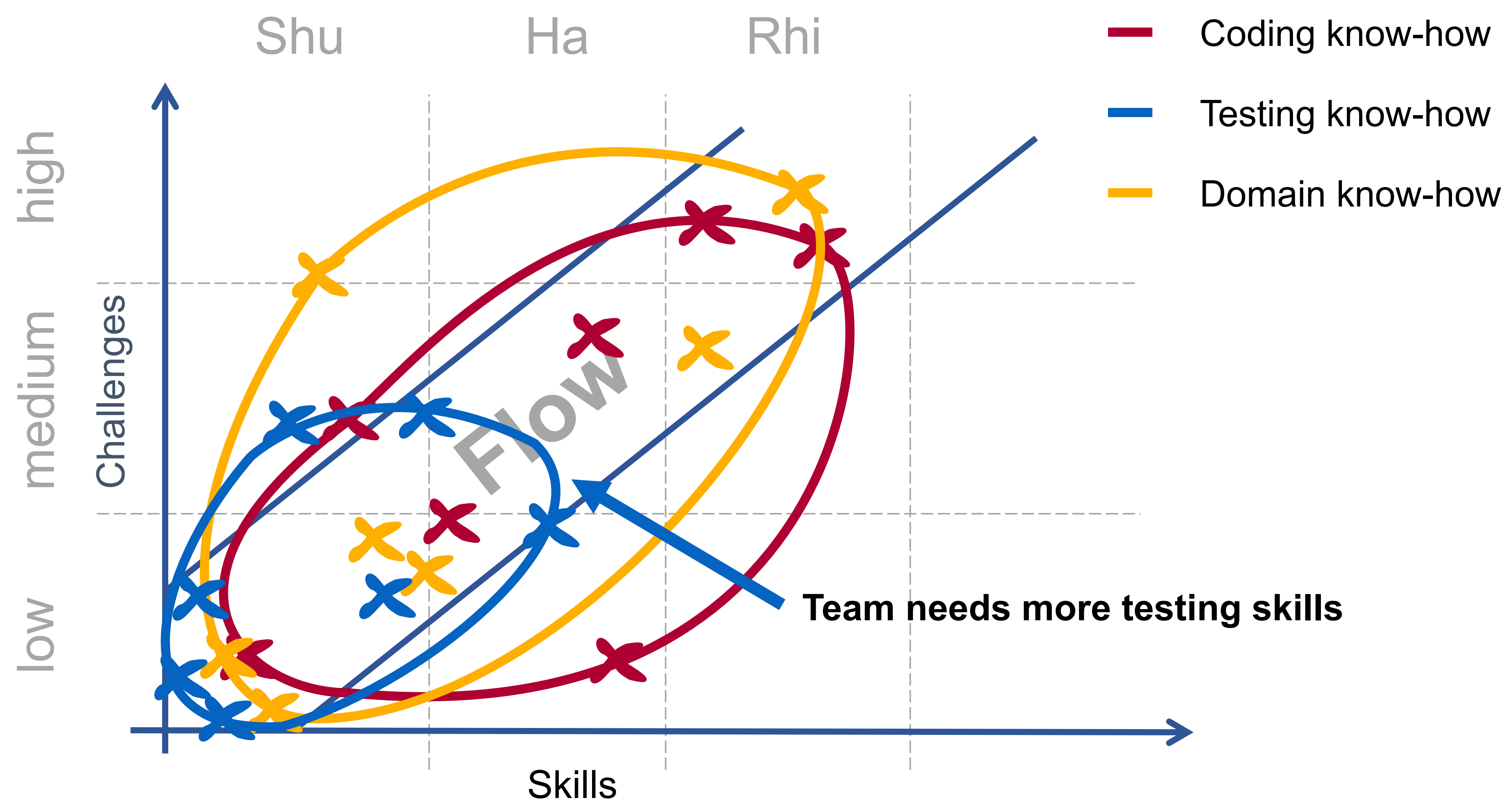
- Individual
- Independent
- Self-estimate







TKM: Starting point



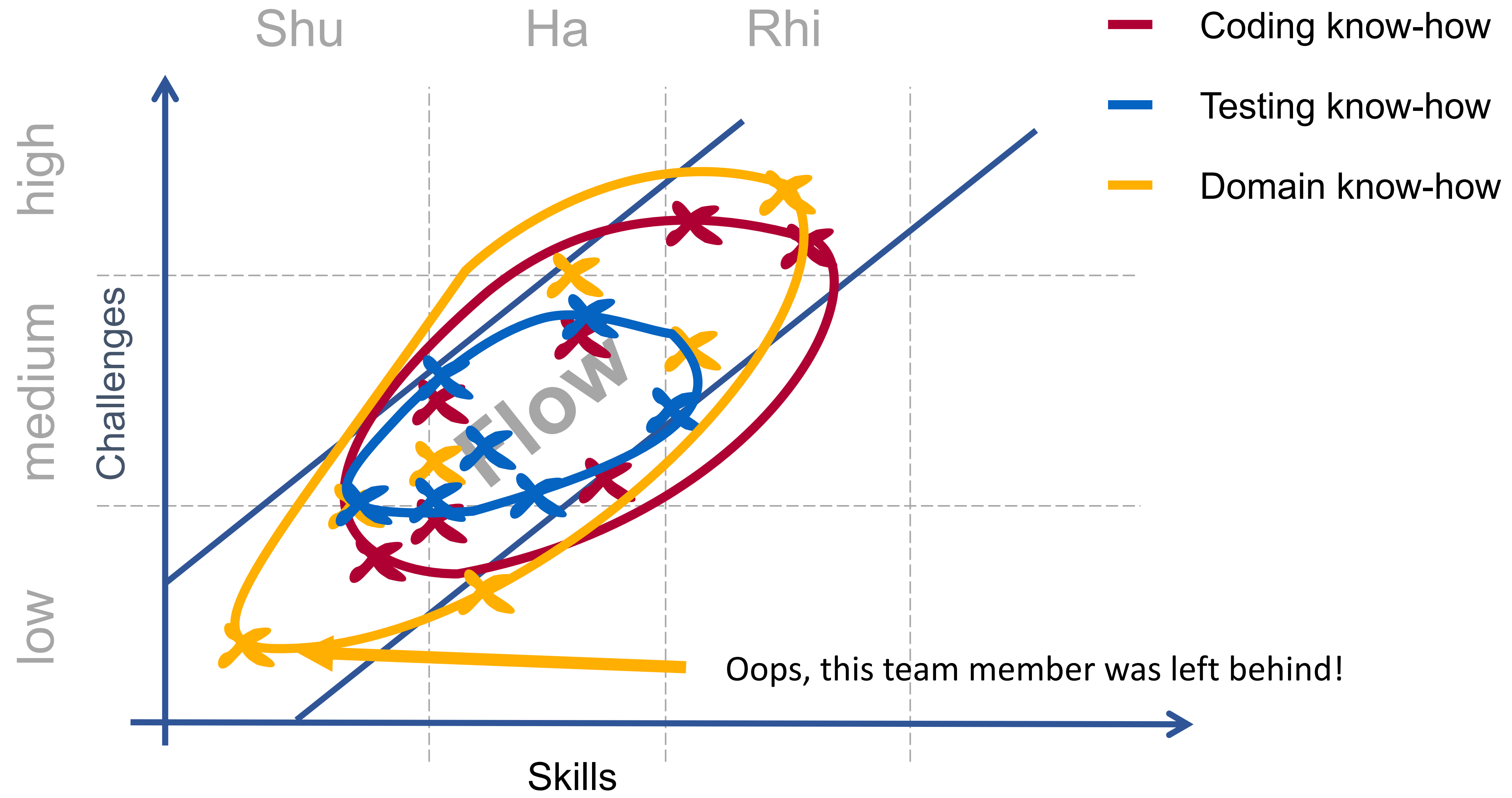
Team needs more testing skills

TKM: Working on results

Improvement of team knowledge is a team target

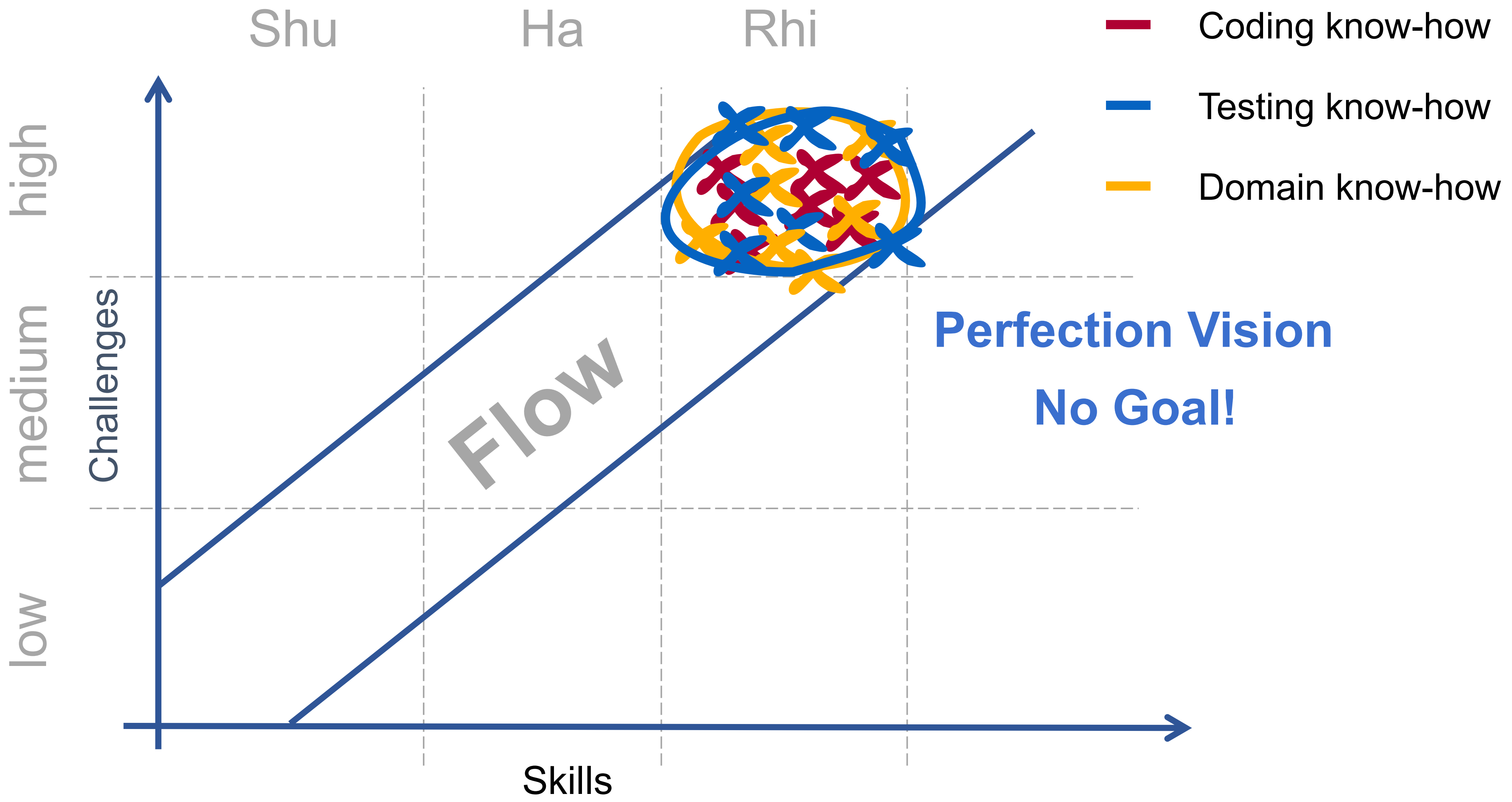
- Find concrete measures
- Identify pairs for learning
- Agree on the schedule for the update of the TKM

TKM: Progress



Oops, this team member was left behind!

TKM: Ideal world



Perfection Vision

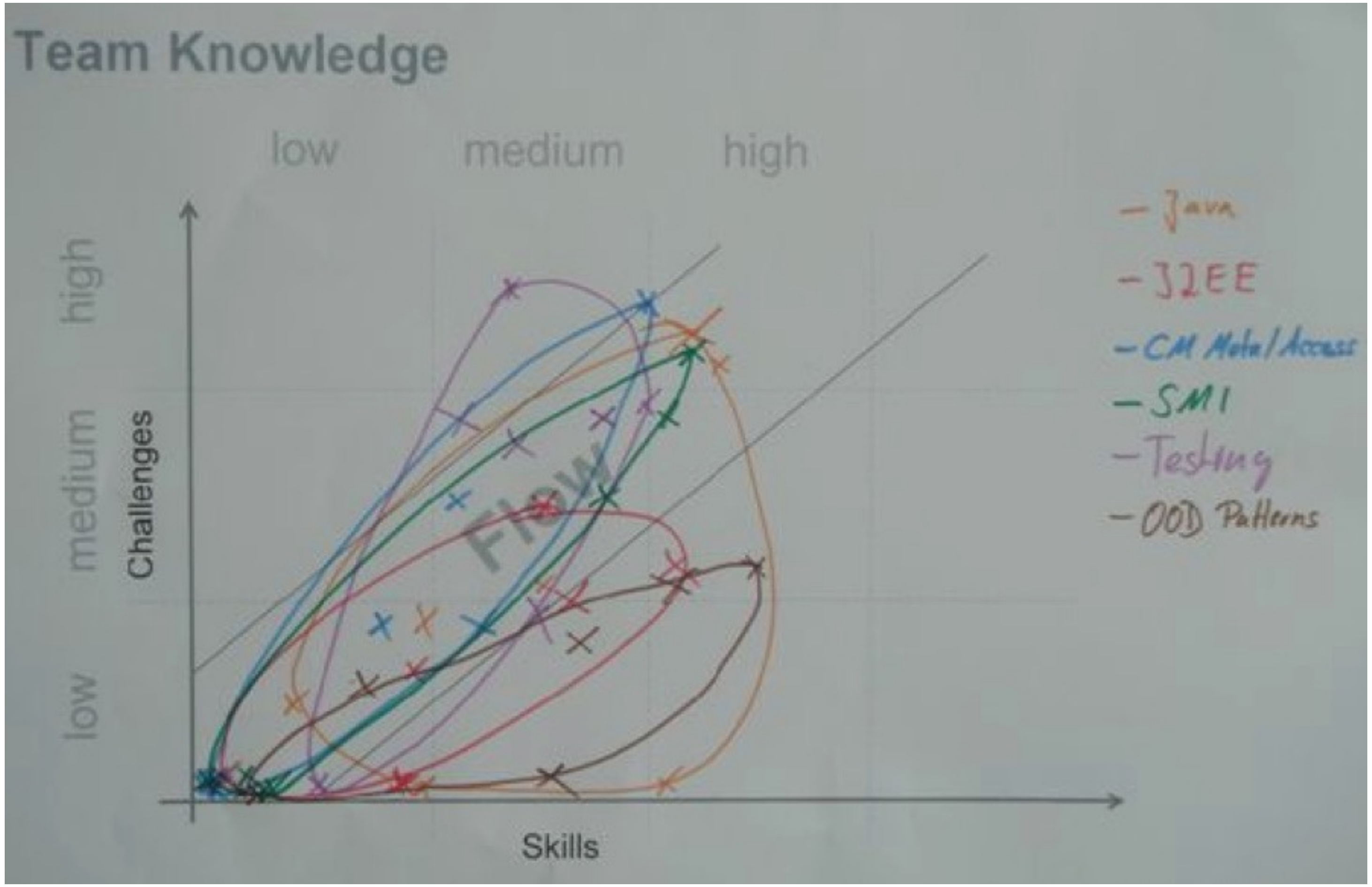
No Goal!

Experiences, Real Life Examples

TKM Example of a Real Team

This chart was created during the first team-building workshop.

Team setup with newbies and experienced employees.



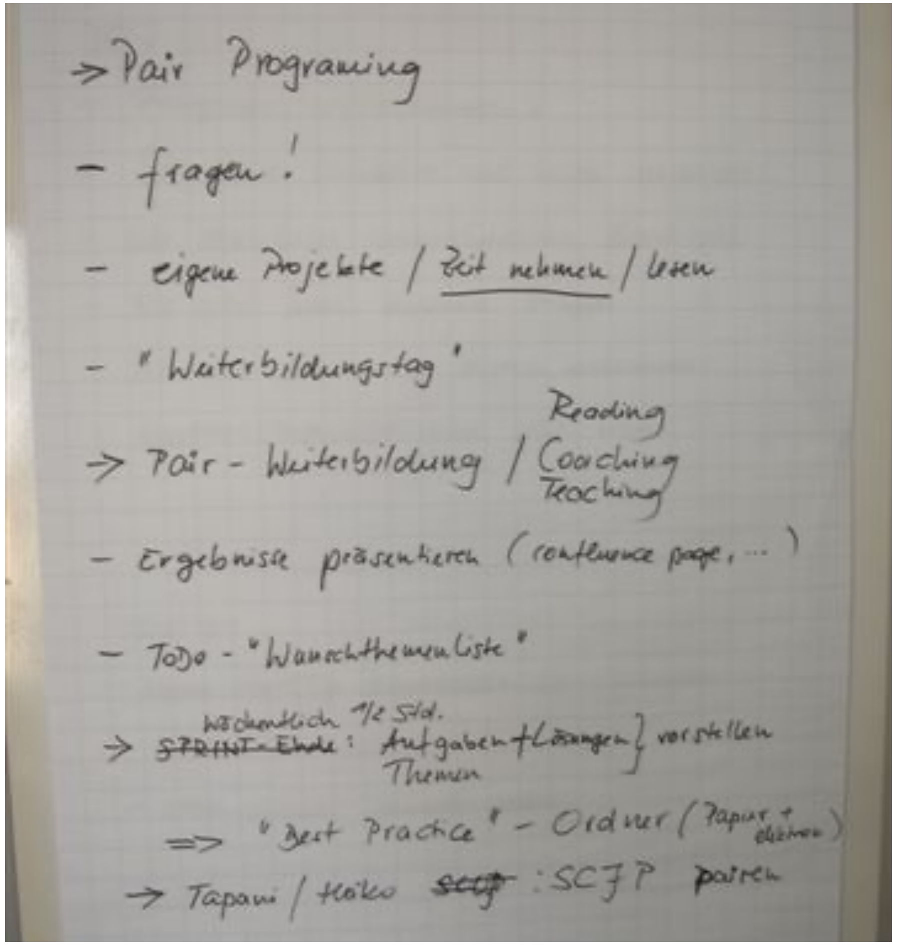
Team Working on Results

Discuss results

- Expert needed?
- Hugh circle?
- Smal circle?

Find measures to improve

- Pair-Programming
- Pair-Learning
- Questioning
- Learning day
- Wish list



→ Pair Programing

- fragen!
- eigene Projekte / Zeit nehmen / lesen
- "Weiterbildungstag"

→ Pair - Weiterbildung / Reading
Coaching
Teaching

- Ergebnisse präsentieren (confluence page, ...)
- ToDo - "Wunschthemenliste"

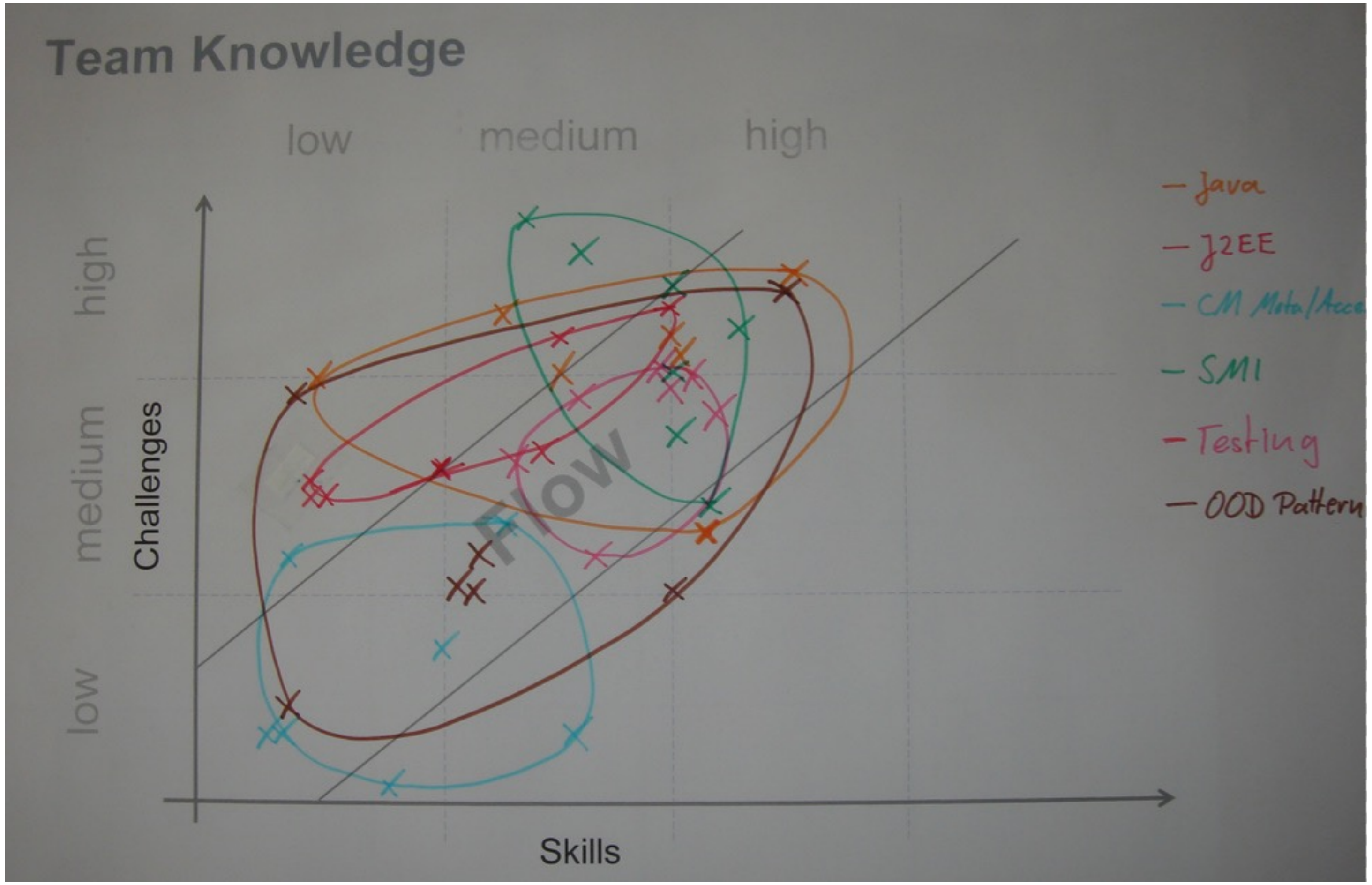
→ ~~SPRINT-Ende~~ wöchentlich 1/2 Std.: Aufgaben+Lösungen / Themen } vorstellen

⇒ "Best Practice" - Ordner (Papier + elektron.)

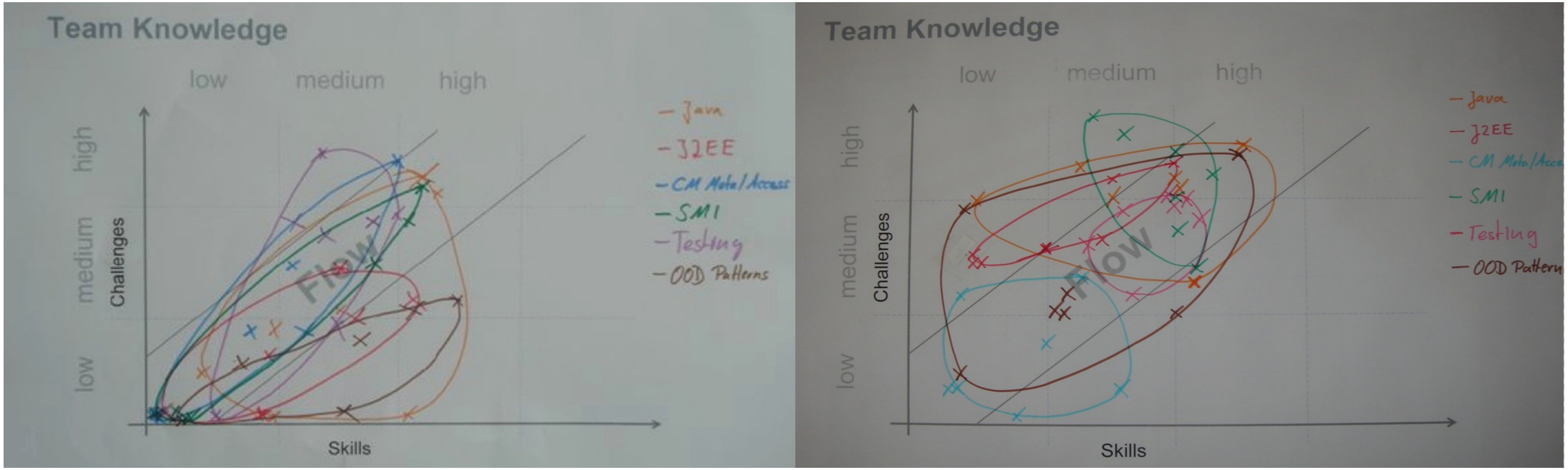
→ Tapani / Heiko ~~scqp~~ : SCJP pairen

Team Follow-up TKM

This chart was created after one year of team working and learning.

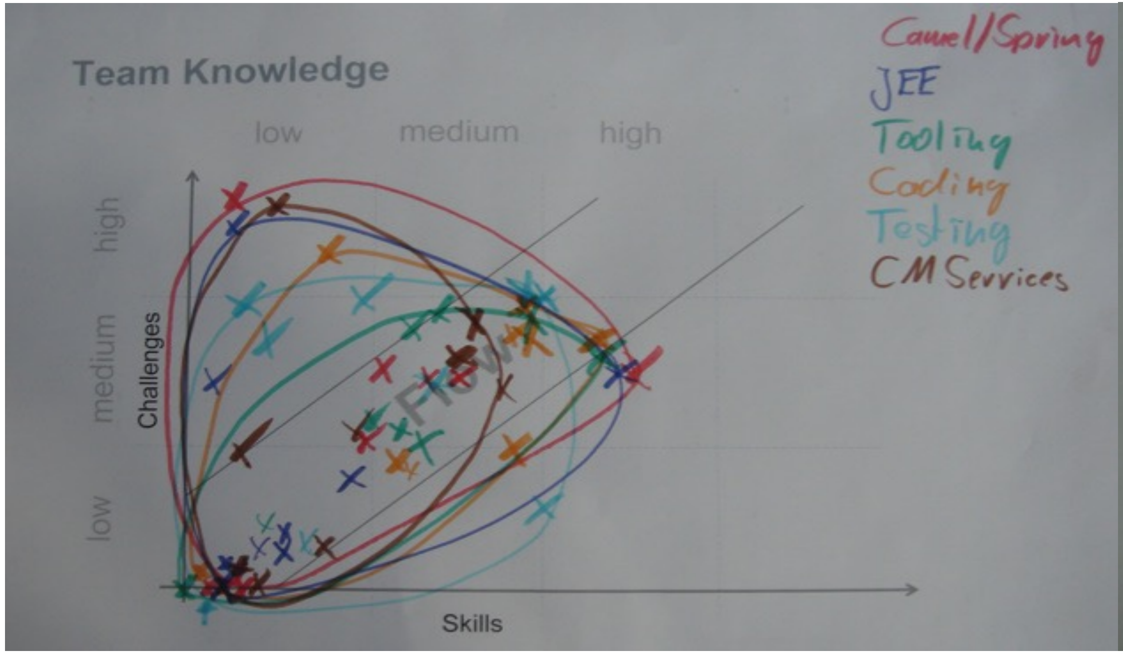


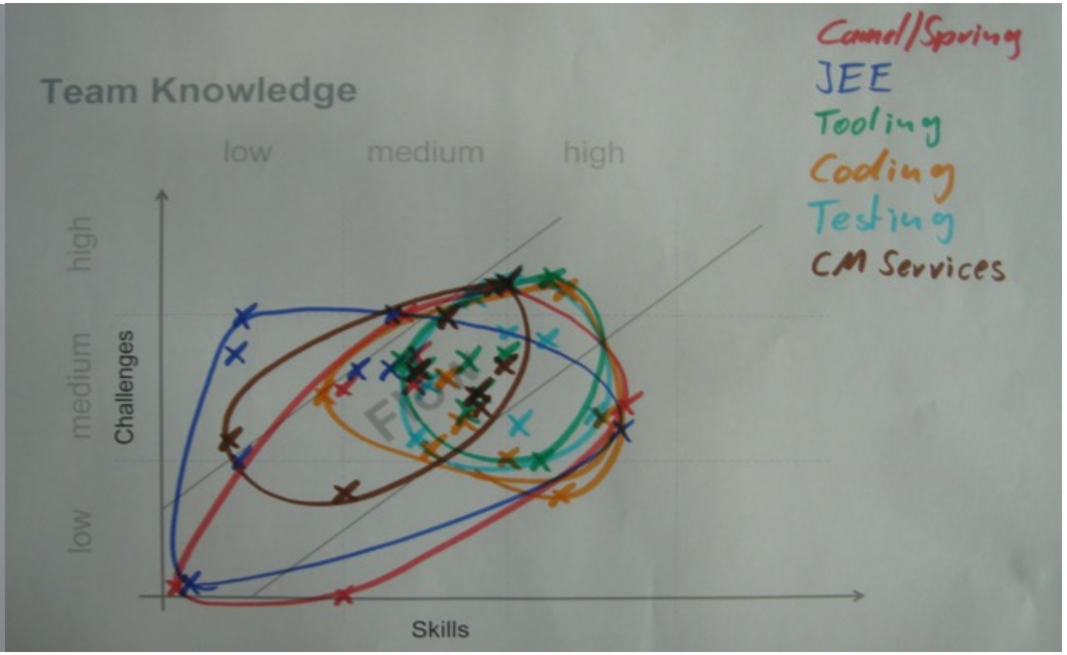
Visible Team Improvement



→ Nearly all areas improved
→ Team works mainly on SMI Interface, which is visible
→ Testing knowledge increases in the whole team quite well

Another Team Example

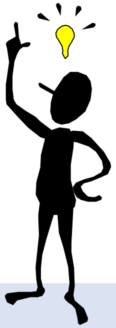




→ The team developed quite well at Testing, Coding, and Tooling.
→ Fewer people felt overwhelmed
→ Scrum-Master and Interface Architect caused the three X at the bottom.

Tips & Pitfalls

Hints



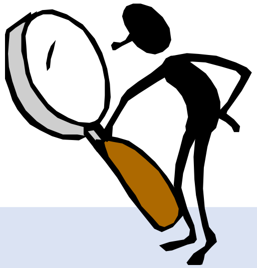
- The team needs to understand/agree that they are all responsible for helping in learn and grow each other
- The self-estimation process is not accurate science, but a good indicator of self-confidence and mood
- Use Retrospectives or explicit Team-Building-Workshops
- Recommended frequency: 3,4 or 6 month
- Use a maximum of six improvement areas
- Do not write names to the Xs

Pitfalls

- Some people have problems with offering their self-estimation to others
- TKM can be misused by management to judge people
- Finding proper measures is more complicated, if it’s done anonymously

Potential of The Team-Knowledge-Model

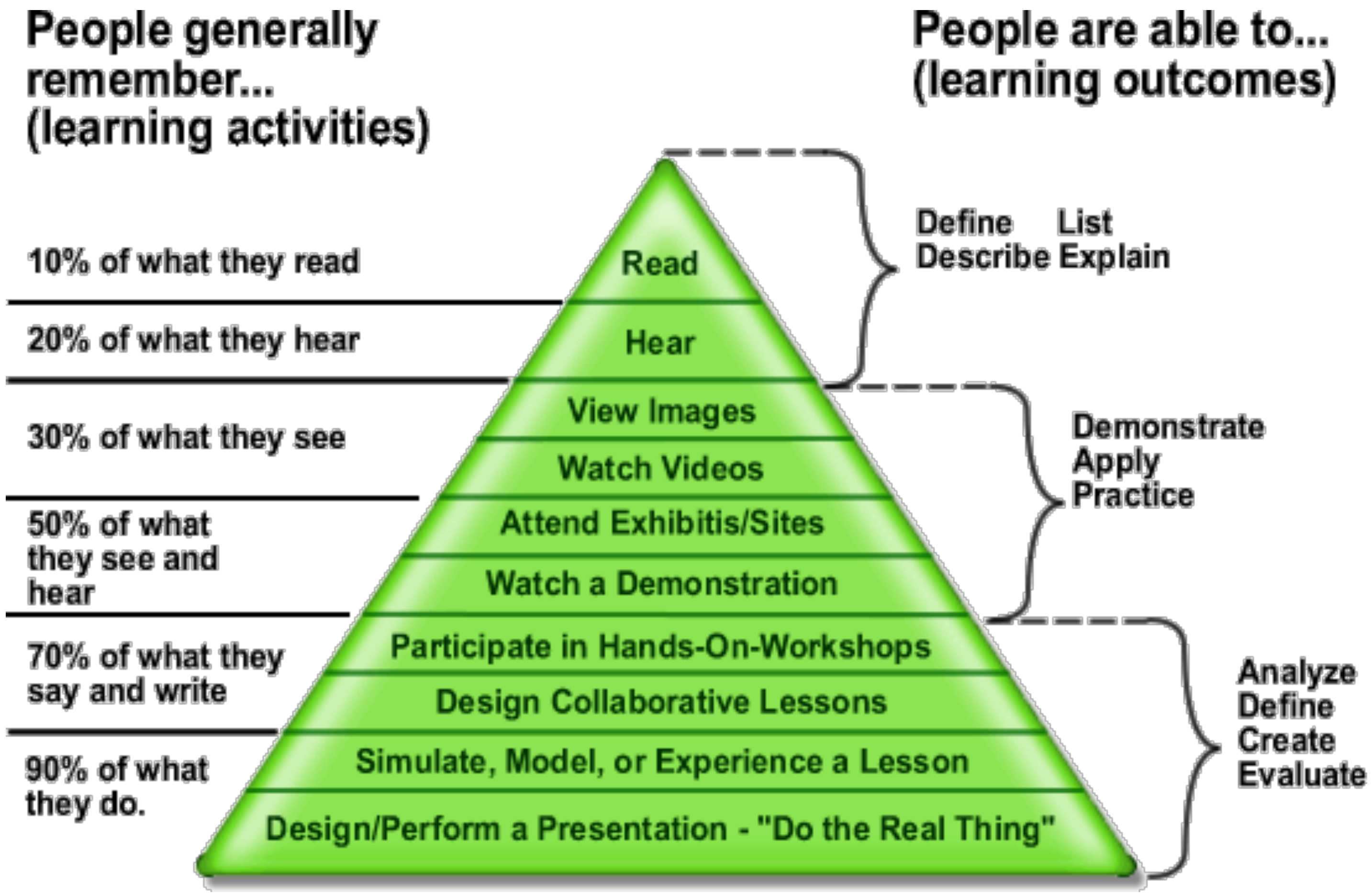
Potentials



- Use the TKM in a multi-team environment to check or setup right team structures
- Hypothetical target TKMs might help optimize and coordinate Know-how development in a multi-team environment.

Interesting Facts About Learning (in Teams)

Effectivity of learning practices



People generally remember... (learning activities)

10% of what they read

20% of what they hear

30% of what they see

50% of what they see and hear

70% of what they say and write

90% of what they do.

Read

Hear

View Images

Watch Videos

Attend Exhibitis/Sites

Watch a Demonstration

Participate in Hands-On-Workshops

Design Collaborative Lessons

Simulate, Model, or Experience a Lesson

Design/Perform a Presentation - "Do the Real Thing"

People are able to... (learning outcomes)

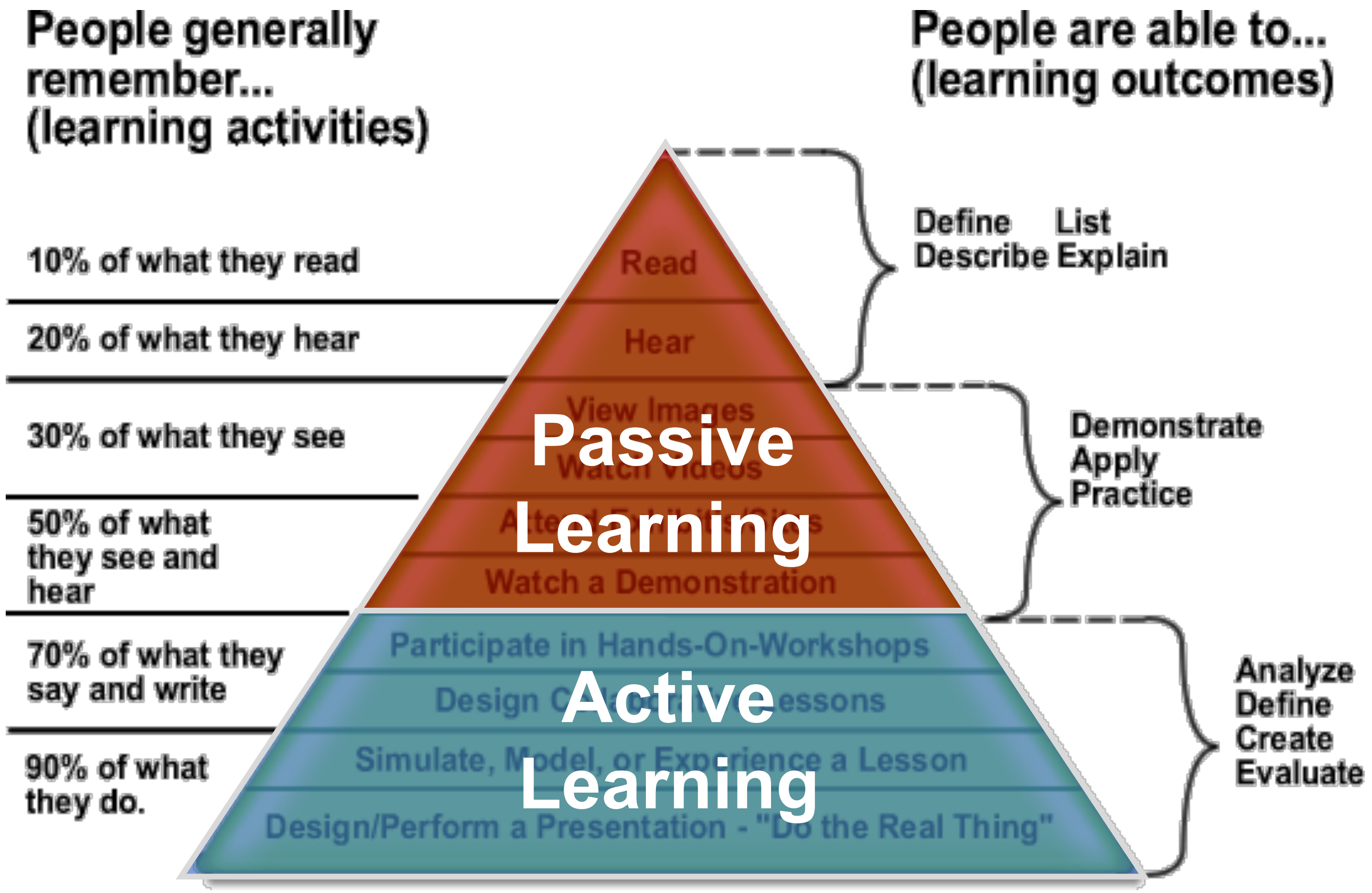
Define List
Describe Explain

Demonstrate
Apply
Practice

Analyze
Define
Create
Evaluate

Source: http://www.edutechie.ws/2007/10/09/cone-of-experience-media/

Effectivity of learning practices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Participate in Hands-On-Workshops
Design Collaborative Lessons
Simulate, Model, or Experience a Lesson
Design/Perform a Presentation - "Do the Real Thing"
Passive Learning
Active Learning
Define List
Describe Explain
Demonstrate
Apply
Practice
Analyze
Define
Create
Evaluate

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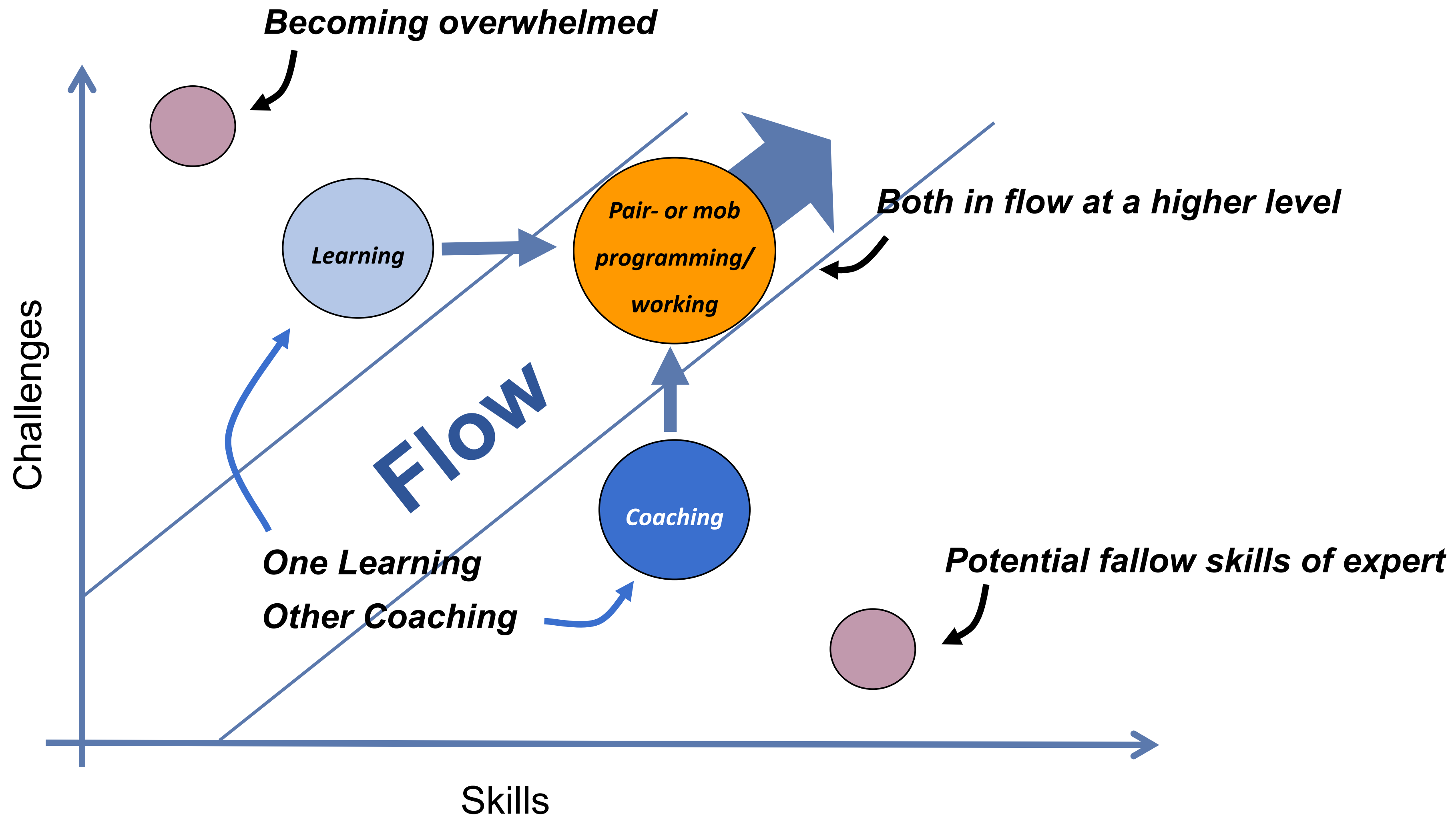
Pair-Programming as learning practice


Becoming overwhelmed
Learning
Pair- or mob programming/ working
Both in flow at a higher level
Challenges
Flow
Coaching
One Learning
Other Coaching
Potential fallow skills of expert
Skills

Some helpful learning practices

- Pair-Programming
- Coding-Dojos
- Community of Practice (cross-team-learning)
- Pair-Learning, Pair-Reading
- Reserve time for individual learning in each sprint
- Forums (e.g. an Agile-Design-Forum and introduce the S.O.L.I.D. and GRASP design principles)
- Introduce ATDD and TDD
  (will lead to a better domain, test and coding understanding)

Q & A Session