

"Are we (ever) there yet?"

Working through complex change in a large organisation

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Carl Zeiss Microscopy

3 October 2024

Warm-up

On your desk is a prompt for thinking about the complexity of your current context.

This sheet is for you to keep.

Fill out this "bingo card" as we go through the talk.

 Mark the ones that apply to your context. Afterwards, will pick one or two popular ones to explore further.

Agenda



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- 01** An introduction to ZEISS and my context
 - 02** Some case studies on our improvement experiments
 - 03** Wrap up
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A very brief history of ZEISS

An OG tech company, est. 1846



Carl Zeiss, Ernst Abbe, Otto Schott

The mechanic, the physicist, the glass chemist

Pioneers and entrepreneurs in combining research, technology, engineering and business

ZEISS then and now

The [Carl Zeiss Foundation](#) is the sole shareholder of Carl Zeiss AG. This ownership structure ensures stability and long-term-orientation.

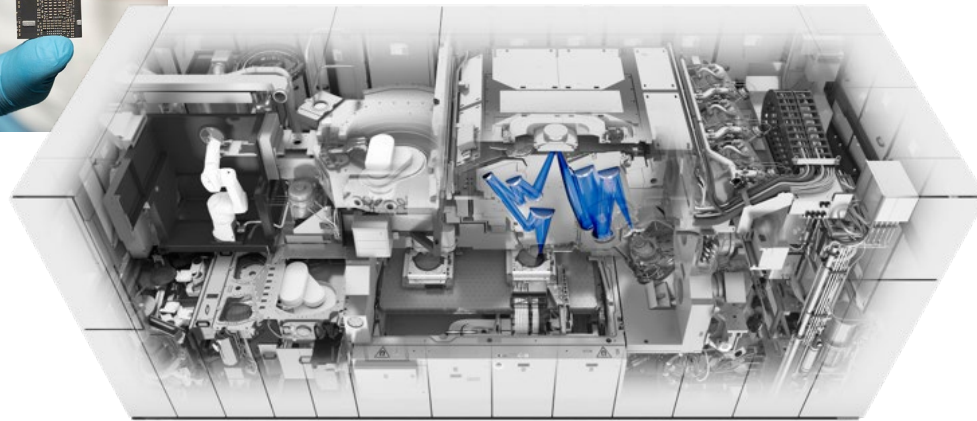
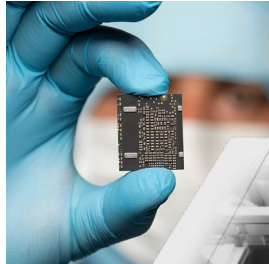
- Promoting scientific progress internally & externally
- 15% of revenue is invested in R&D
- Pioneers in employee wellbeing policies since 1896 (working hours, leave, health, pension, survivors' insurance, salary, independent workers' committee)

 Playmobil Carl Zeiss is holding a microscope in his left hand and the first illustrated product catalogue on microscopes from 1881 in his right hand.

OG: "original gangsta" – denoting something incredibly expert, authentic, or "old-school"

My favourite ZEISS facts

Continuing the legacy of scientific engineering



About **80%**
of microchips worldwide

are made with **ZEISS optics**
on ASML [lithography systems](#).

EUV (extreme ultraviolet) technology
enables mass production of the world's
most advanced microchips

More than **30**
Nobel laureates

have used **ZEISS systems** to [advance
scientific progress](#) since 1905

Over **25 hours** of
live cell mitosis

can be observed in 3D, at subcellular
resolution using [ZEISS' Lattice
Lightsheet 7 microscopy system](#), so
gently that it does not kill the organisms

Microscopy – from the inside

A tale of 3 product centers

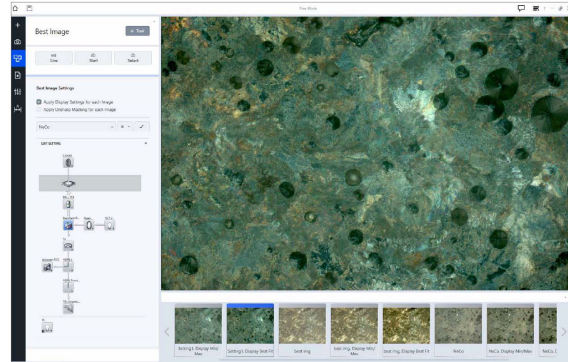


Light Microscopy (LM)

- Current incarnation of the original ZEISS business founded in 1846
- *Jena and Munich*



Fun fact: It takes around 8 hours to travel by train from Rostock to Munich – roughly the same as flying there from the UK.



Software (SW)

- Originally a cost center to provide platform software engineering to LM & EM
- As of 2021 a product center with revenue responsibilities
- *Munich, Rostock and UK*

This where I'm based 🖐️



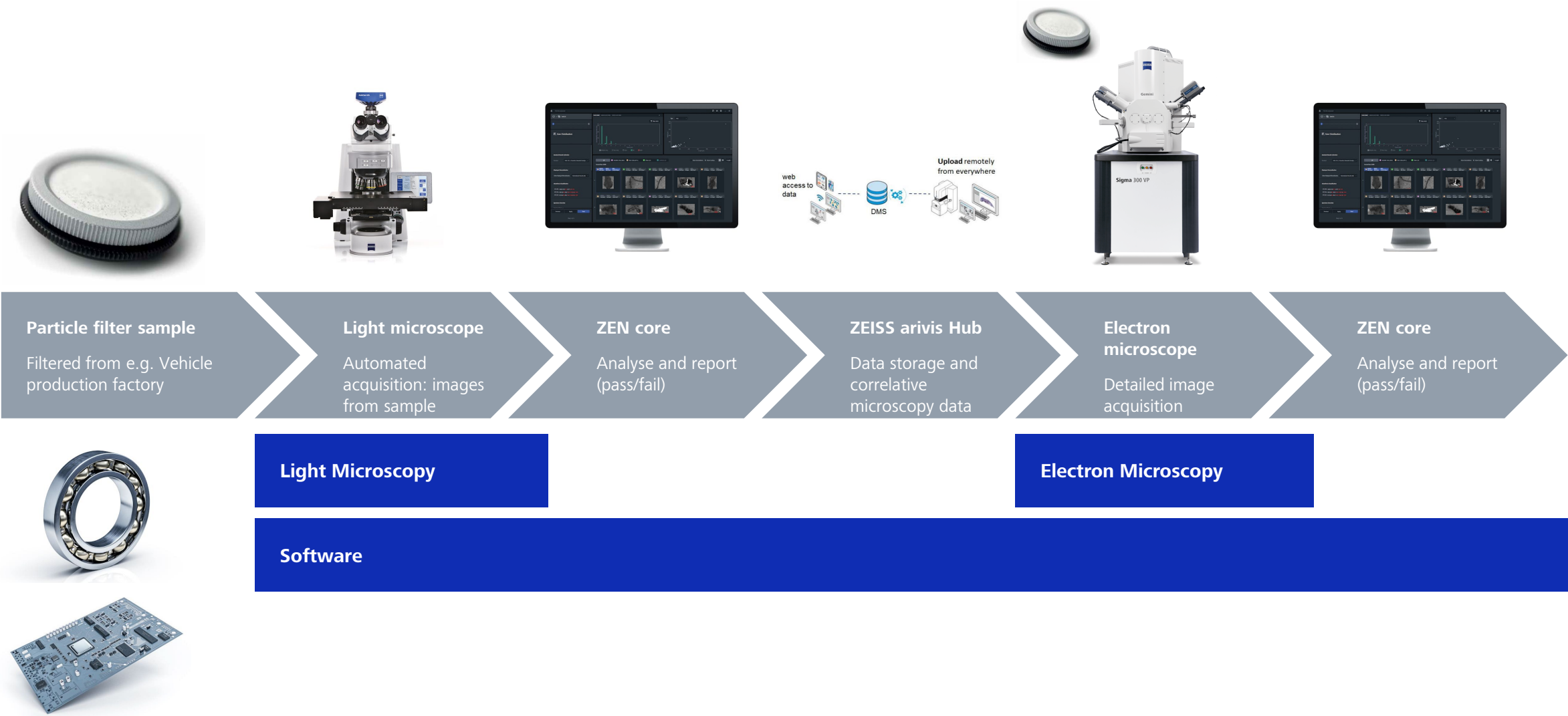
Electron Microscopy (EM)

- Was originally founded as Cambridge Instruments 1962, then LEO, before acquisition by ZEISS in 2004
- *Oberkochen and UK*

Collectively, we are one Strategic Business Unit

Example use case

Technical Cleanliness Analysis



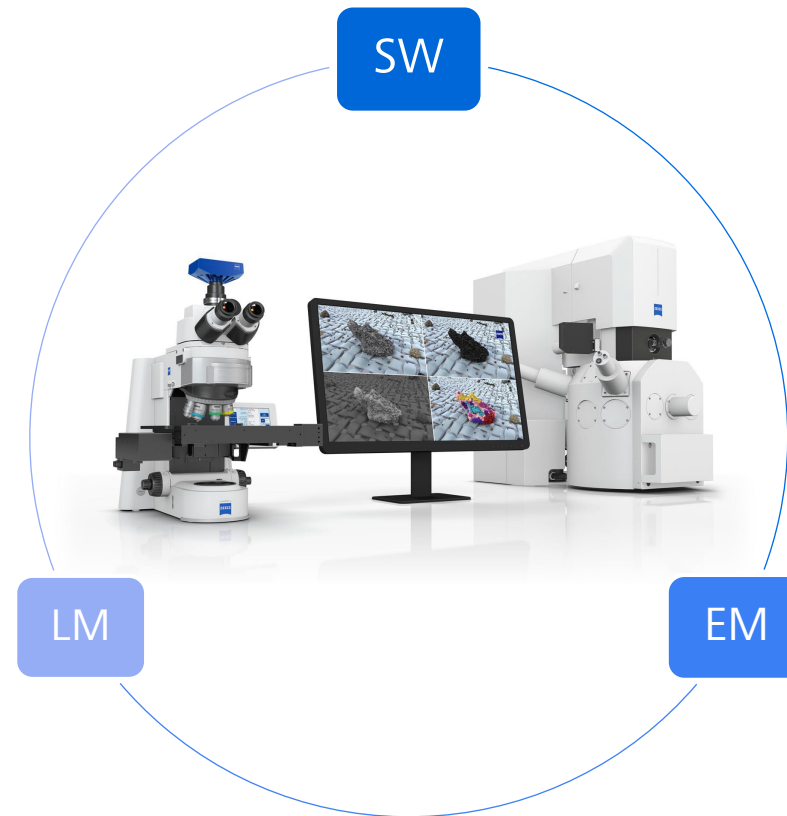
How can we work better together?



For successful products

- Software needs to work seamlessly with acquiring an image (Light Microscopy/Electron Microscopy)
- Light Microscopy/Electron Microscopy needs Software for platform functions

➔ **We are interdependent**



What are our strengths?

- Fantastic expertise (product and technical)
- High standards for achievement and quality (pride in our brand)
- Longevity of tenure/career (for better or worse!) – dedication
- Curiosity and willingness to share

How can we work better together?



How many cultures can you see?

- Site cultures – Oberkochen, Munich, Jena, UK, Rostock
- Departmental cultures – including management styles, ways of working
- Direction – hardware sales (production-focused) vs software sales (hardware-agnostic) vs service. Different senses of purpose.
- Project vs Product mindset
- Language – English-first vs German-first



Services?



Software products?

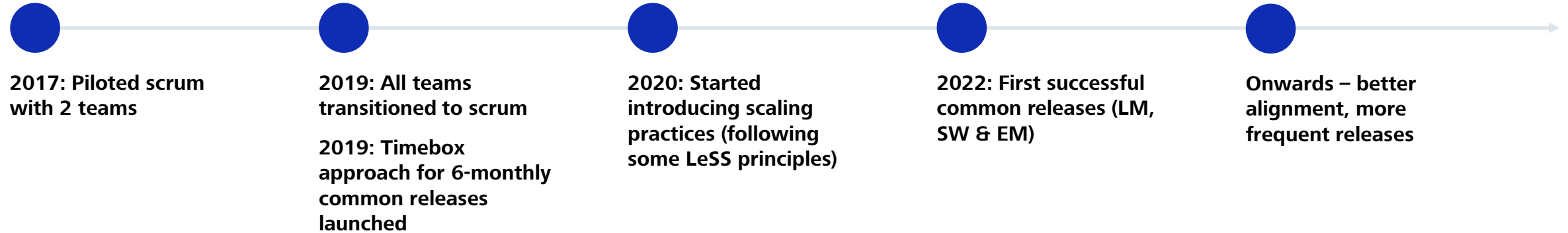
Hardware products?

Interdependencies and challenges

- Common architectural platform
- Different priorities
- Complicated product landscape
- Legacy organisation – annual budgeting, legacy management practices, hierarchical organisation at top (agile bubbles)

What have we been doing?

SW product center's agile journey



Approach to change

Agile practitioners supporting teams day-to-day and catalysing greater changes

Management-driven group goals to initiate behavioural change

2019: Changes to working practices “rolled out” as initiatives

2021: Introduced process change management via experiments and with fair process in mind

Supporting activities

Leadership – fortnightly peer group coaching sessions

Agile Community of Practice – knowledge sharing and safe space to practice techniques, facilitations and games, coaching support

Training – positive support and attitude to lifelong learning

Wiki usage – improving visibility of processes

Sharing – communicating updates to the community

"Are we (ever) there yet?"

Complexity in my own context

Name _____



This sheet is for you to keep.

Product factors	Organisation factors	Cultural factors	Insert your factors here
Legacy products	Hierarchical organisation	Different countries	
Platform Migration	Matrix organisation	Different languages	
Systemic interdependencies	Financial policies	Different site cultures	
Hardware	Divergent priorities	Differences in psychological safety	
Firmware	Organisational siloes	Differences in diversity levels	
Software	Legal policies	Time zones	
Cloud	HR policies	Levels of communication	
Long release cadence	Differences in use of /incompatible business systems	How decisions are made	
CI/CD in practice	Processes	Different nomenclature	
Manual testing		Management style differences	

What is your current context?

Fill out this “bingo card” as we go through the talk. ➡ Mark the ones that apply to your context. Afterwards, will pick one or two popular ones to explore further.

What will you take away from this session?

Case studies

Choose our next adventure



[Product](#), [Organisation](#) or [Culture](#)?

I have prepared three examples of change experiments that we at ZEISS Microscopy have run, that align with these themes.

Have a chat with your neighbour about your areas of interest.

Based on time, we can explore 1 deeply or 2-3 briefly in the rest of the session.

5 minutes before the end I will wrap up with some closing thoughts.

Product example

Improving development efficiency and product quality



Why (motivation)

Increase focus on data-driven decision making to improve development efficiency and product quality.

What (measurement)

Sum of **impact points** done in work items relevant for the goal.

Impact points = Story points * Scaling Factor

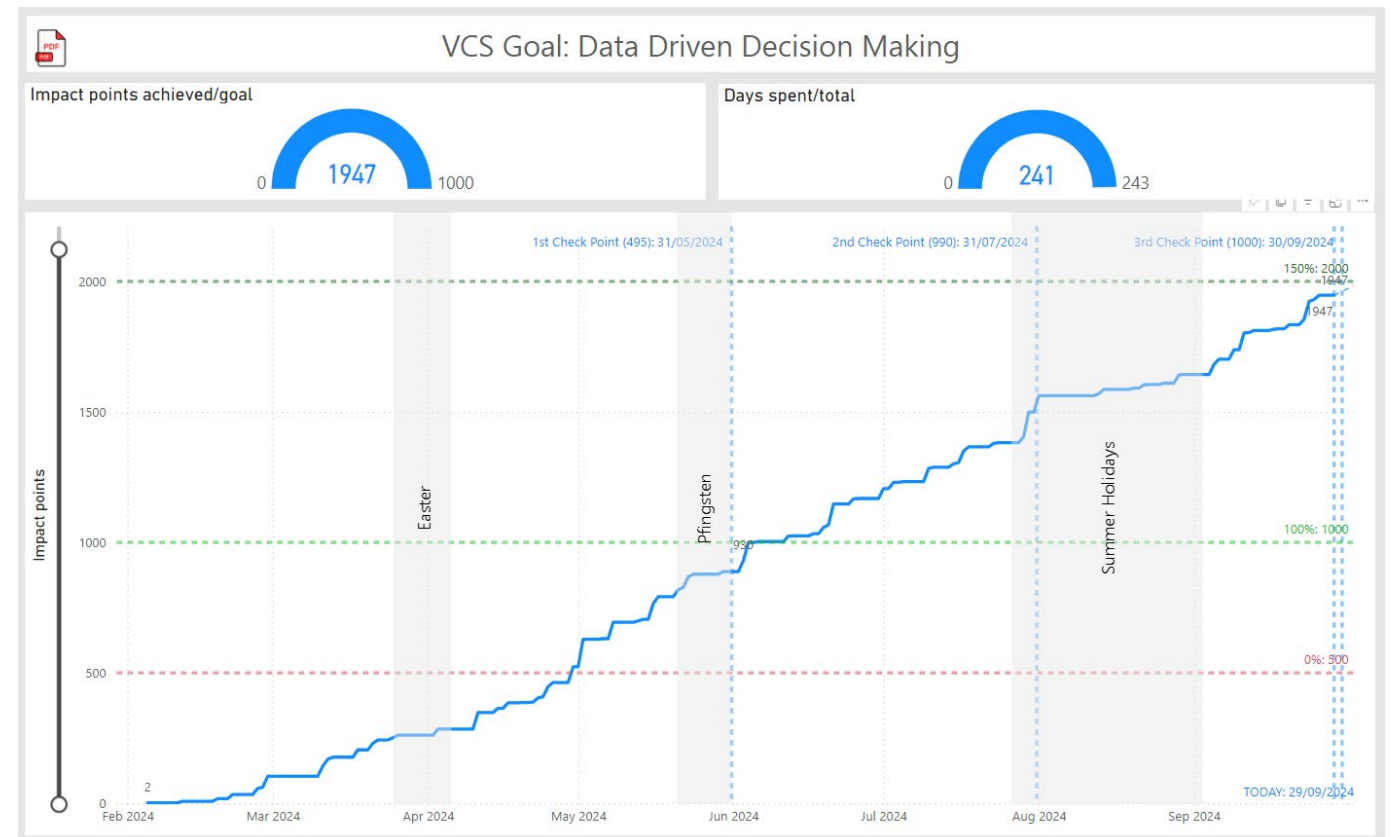
How

Work items will be derived from following sources:

1. **ZEN Developers Survey results** – Closing work items defined
2. **Predictive Analytics** – Deriving work items from Predictive Analytics
3. **Technical debt backlog** – Working on items from the existing technical debt backlog
4. **Code Analysis Tooling** – SonarQube and Team Scale

Agility benefits

- Using data-driven feedback to prioritise work
- Self-organisation how the work will be done
- System-level benefits realisation



Cultural example

Networking and Method Exchange

Why (Motivation)

Foster exchange between the teams about projects and working methods to continuously improve and learn from each other

How

Work together with one colleague from another team as a buddy

Steps

- 1) Grouping of the buddies (done by team leads)
- 2) Join the buddy in his/her projects and for technical exchanges to discuss common aspects and differences
- 3) Each project team does a lessons-learned with the team and their buddies
 - Collect feedback within the team and transfer the most important ones to a general Miro-Board
 - Try out methods in the team as experiments
- 4) Pre and Post Survey for all participants

Measurement

Point system, points accepted by Team Leads

Experiment Name
Team



The Experiment What do we want to try out? Why do we want to try it? 	The Runs How did we do our experiment? 
The Outcome What did we learn? 	The Result Will we use the method again?  

Cultural example

Networking and Method Exchange

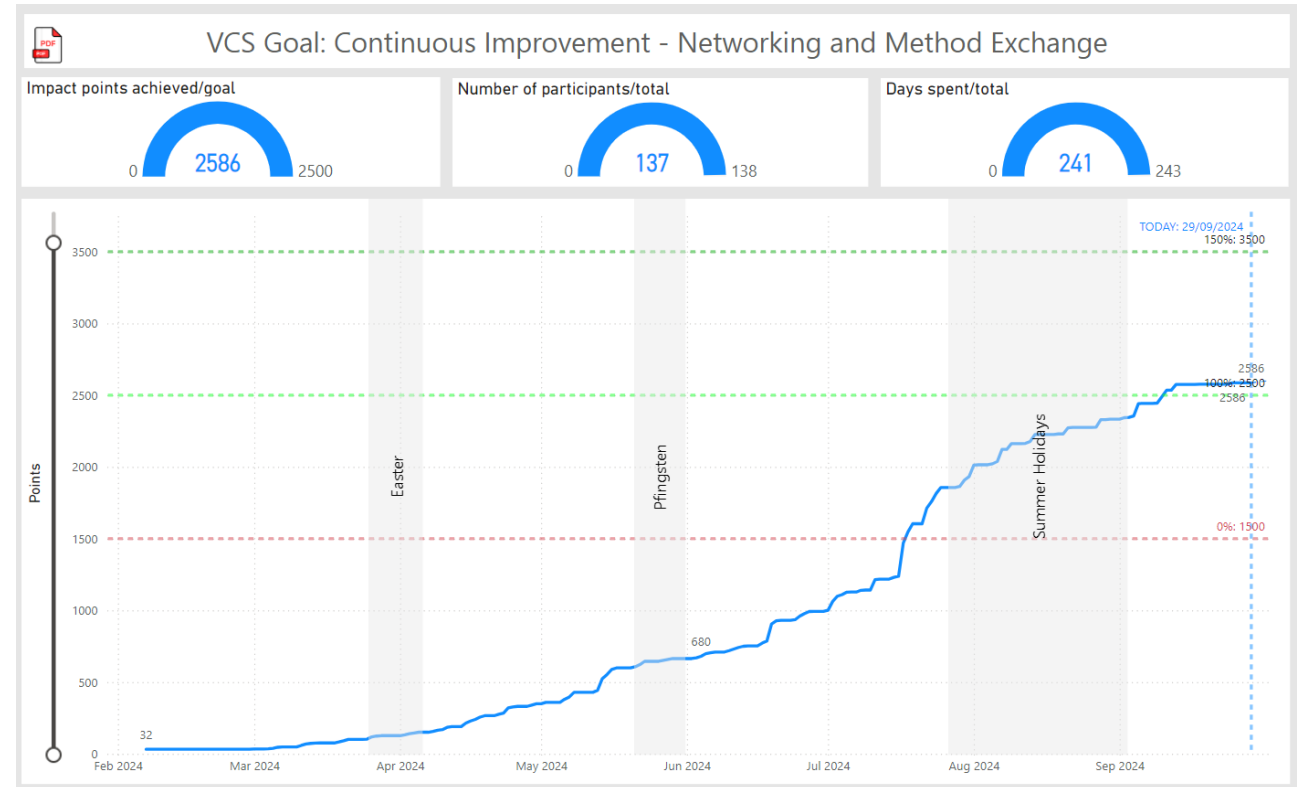


Point system

Join the buddy for:	Points
Daily	1
Backlog Grooming / Refinement	2
Sprint Review	2
Sprint Planning	2
1h technical work (programming, testing, UX design, ...)	3
Discuss with your buddy 1:1 (points for both):	
1h about working methods in the project team	2
1h about the backlog	2
Additional networking:	
Participation at a Speed Dating Event	2
Personal Meet up on site with your buddy (points for both)	1
Others (Discuss with your line manager)	2
For each project team:	
Lessons-learned session for exchanging feedback	30
Trying out a method (experiment)	10

Each action can be done only once per person

Exception: The project teams can try out as many experiments as they want



Agility benefits

- Building networks and cross-team understanding
- Learning from other teams' working practices

Organisation example

Team Setup Evolution

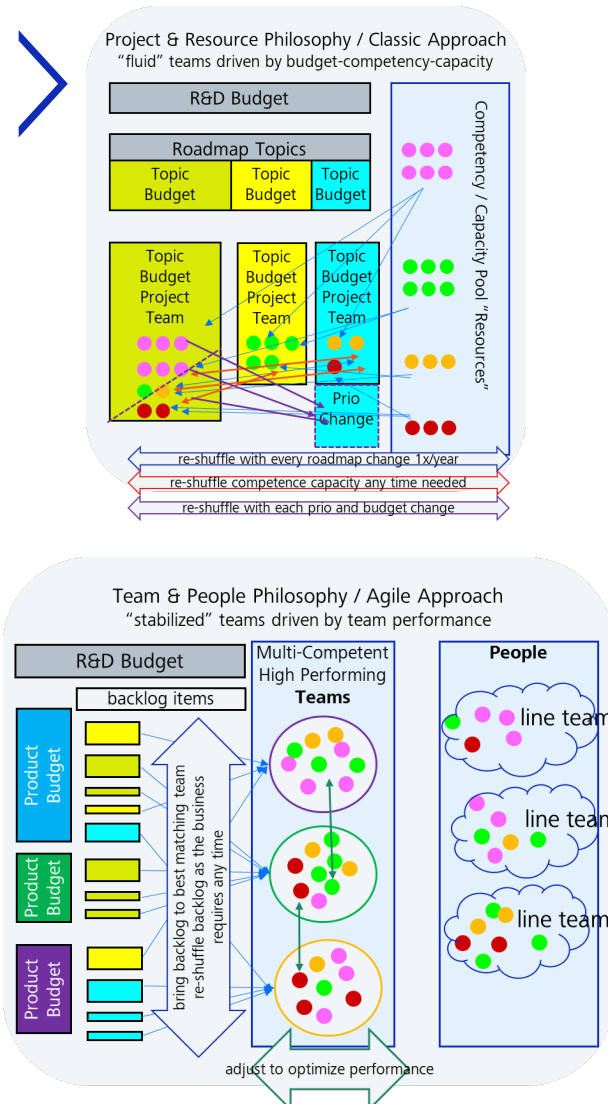
Classic approach

- Budget set once per financial year*
- **Roadmapping** coupled with **projects** coupled with **teams** coupled with **budgets**

Result

- Reteaming at least once per FY
- Reteaming with every roadmap change
- Reteaming for competencies

*Outside of Circle of Control



Agile approach

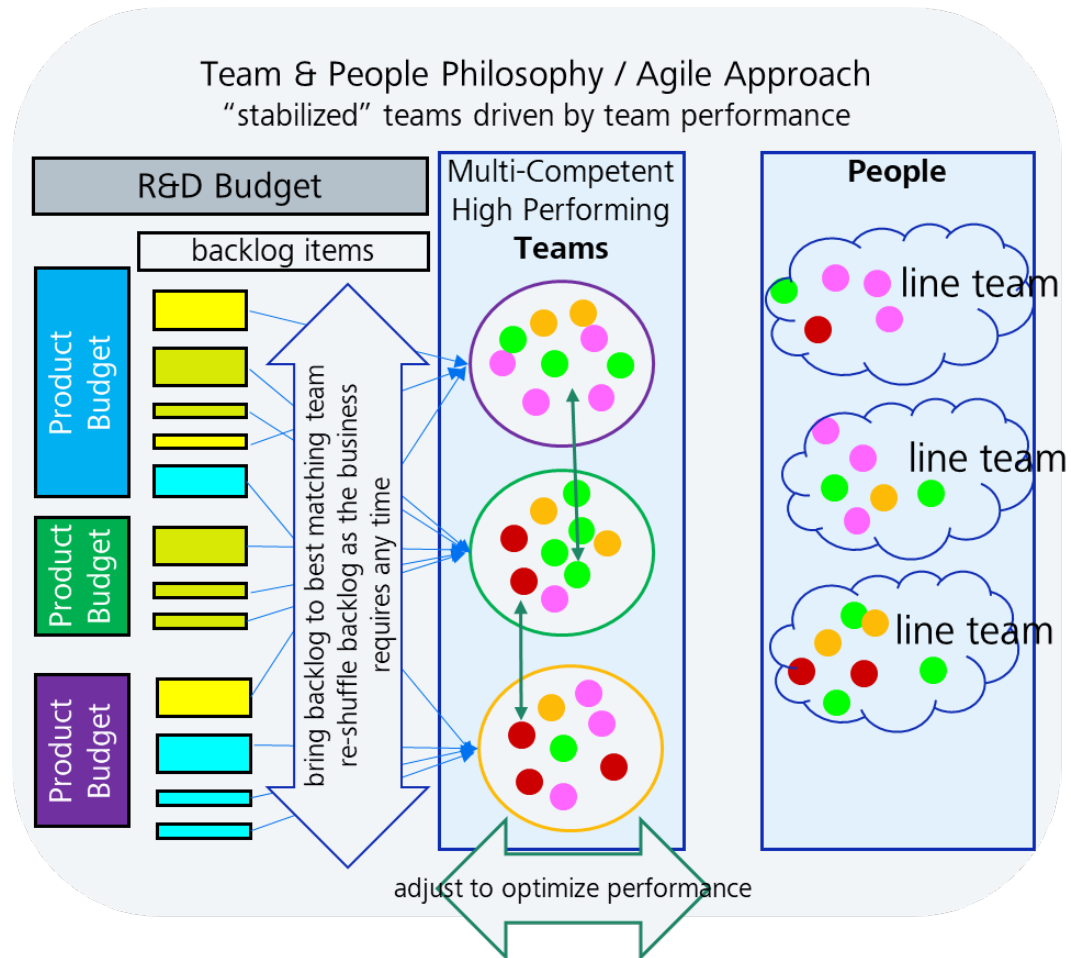
- Budget set once per financial year*
- **Product lines** Projects coupled with **budgets**
- **Stabilised Teams** that in total fulfil the budget
- Roadmapping (backlog & competencies) decoupled from budget/team setup
- When backlog changes, flex to best-fit/best-available teams

Result

- Stabilised teams, changes only made as an exception & during periods with least impact on release cycle
- Team setup can focus on team efficiency, competency mix, team health & personnel development

Organisation example

Team Setup Evolution



Success!

- Between 23/24 and 24/25, all teams remained (mostly) the same.
- Changes were on an individual basis, keeping >80% of people in the same teams.

Learning

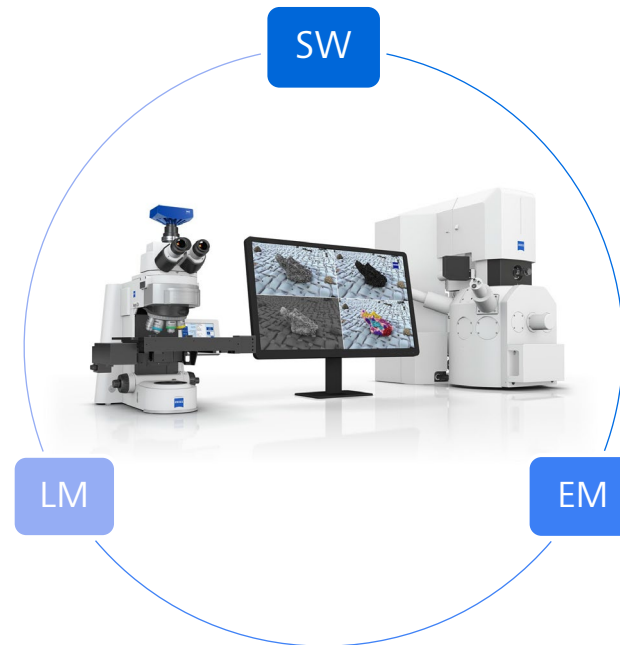
- 3 years earlier we proposed full team self-organisation and were pushed back by the incumbent structure
- 12 months earlier we tried and failed to get this outcome despite the plan being sound – it was too easy to slip back into old patterns
- Fair process, clear purpose, vision, sympathy, alignment and communications were essential for this success.

"Are we (ever) there yet?"

Where are we now?



- We are still in the early stages of our agile journey
- There needs to be more alignment at a higher level
- We have brilliant minds who have the passion to improve
- We are thinking more systemically



But...

- It needs a lot of energy and deep thought
- One of the hardest things is to afford ourselves the time and space to step back from the urgency of delivery to build a shared vision of the future

"Are we (ever) there yet?"

Closing thoughts



With such a great pedigree, taking inspiration from the pioneering reforms made by Ernst Abbe with the Carl Zeiss Foundation – I know we have it in us, we just have to find our path, and be proactive in the relentless pursuit of improvement.

We as change agents also need to look after each other, and be mindful of our own safety and wellness along the journey.

Thank you!



💖 *This was my first talk so please give me feedback on how I can improve in future*

"The proactive belief: Proactivity in the relentless pursuit of improvement."
- Simon Powers, the Agile Mindset



Seeing beyond