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ENGAGING END-USER-MODELERS

An Action Research Study

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Action Research is a social sciences research methodology that seeks transformative change through simultaneously taking action and doing research, linked together by critical reflection.

Context

■ Organization

- Finanzministerkonferenz (conference of German tax authorities, 16 states + federal level involved)
- Represented by Lower Saxony & Bavaria

■ Application

- mostly assembler, traces back to the 1960's
- IBM/Siemens mainframes

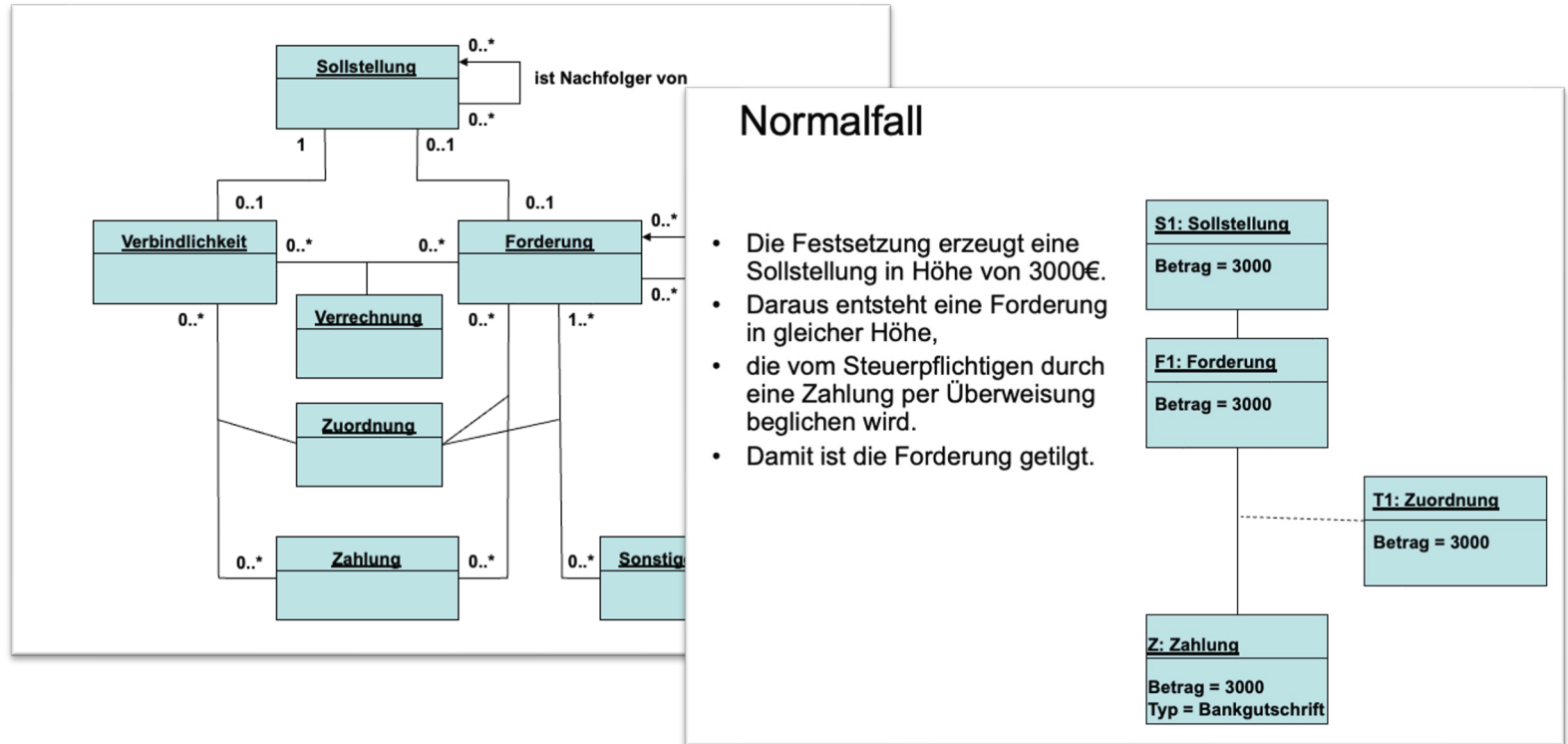
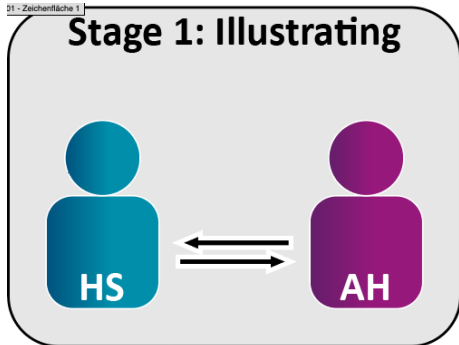
■ Project

- modernize software (platform, technology)
- unify software across states
- third attempt after two major failures ("Fiscus")
- estimated losses in the 100s of M€, up to €1bn

■ Researcher

- Team of consultants for methods & requirements
- together with dev team & architects

1: Illustrate Classes with Objects



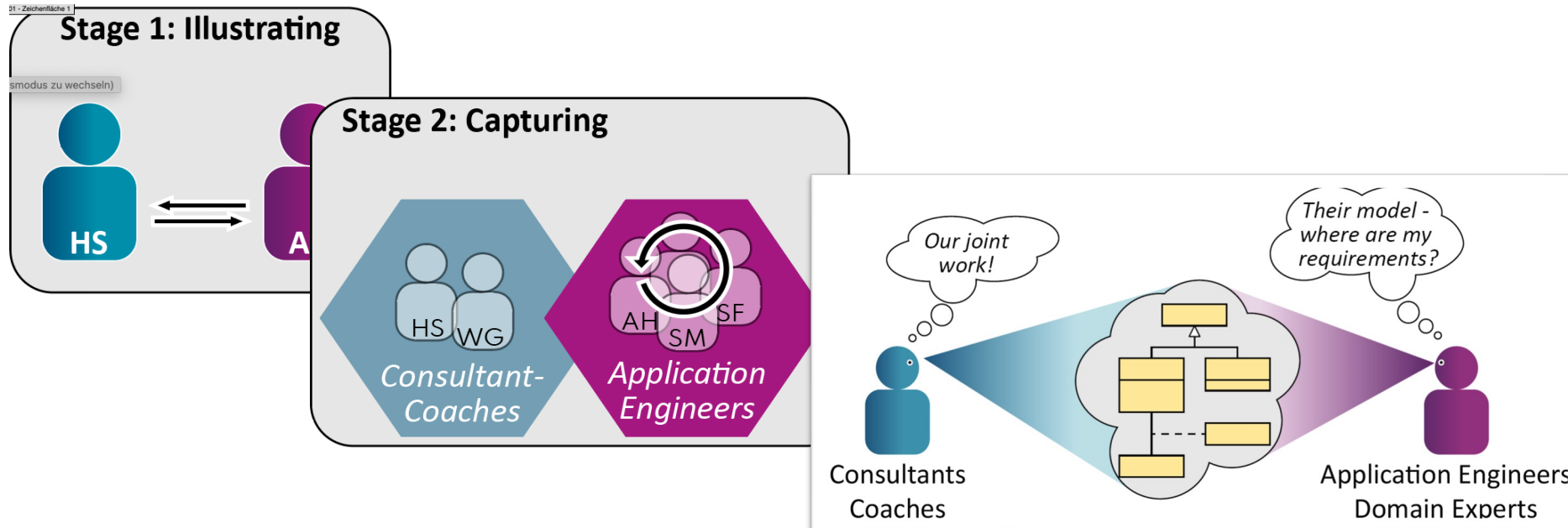
What is a straightforward concept for software engineers is not necessarily trivial for everybody else.

The necessary prerequisite to engage non-SE modelers is to meet them in their world, with a language that they understand and concepts they relate to.

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This is not about meeting them at eye-level, but about terrain.

2: Empower Domain-Experts by accessible tools



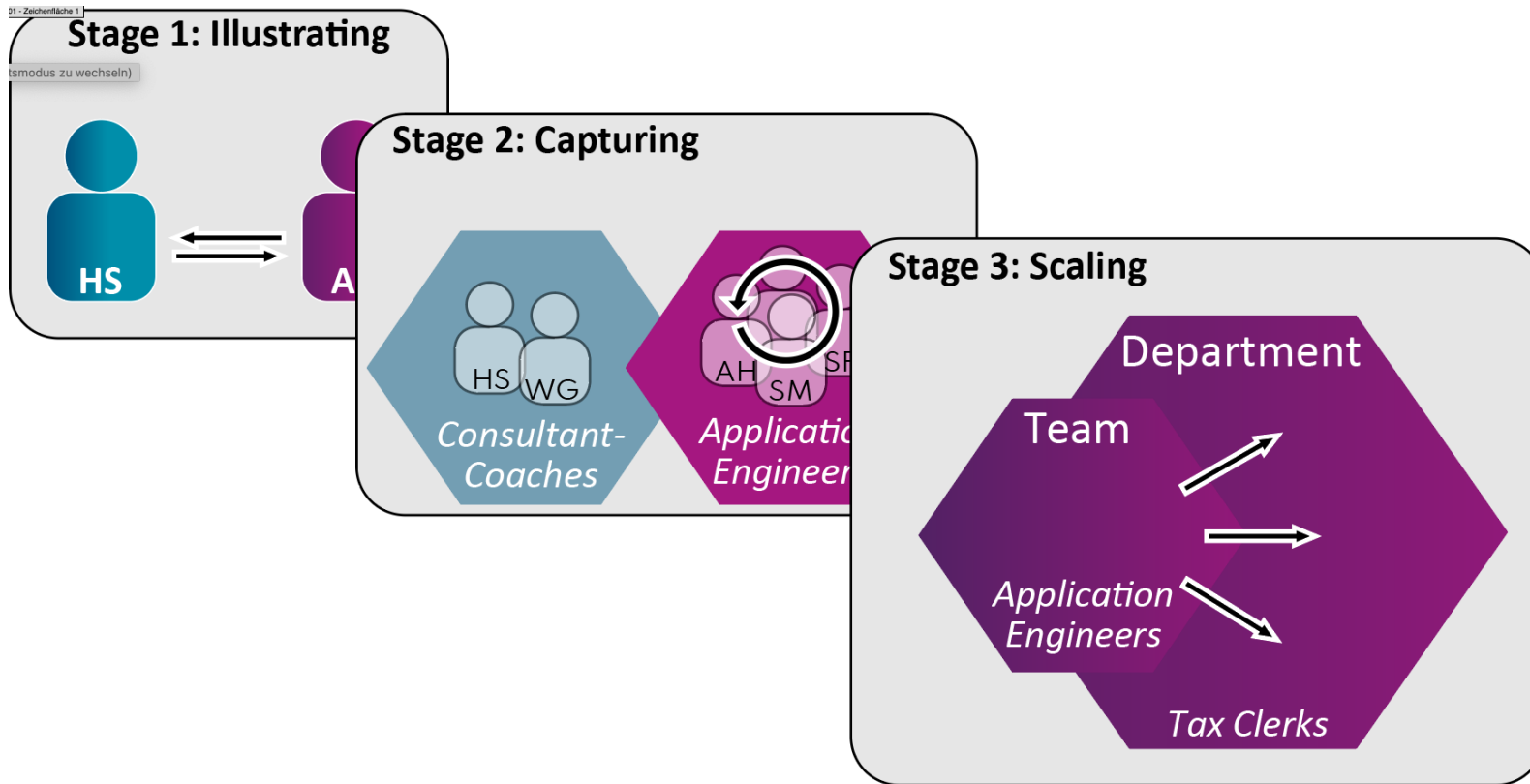
MS PowerPoint presented the lowest possible entry barrier.

Object diagrams created by domain experts were rich in prose commentary, and evolved to capture sequences of steps rather than states.

A second necessary requirement for engaging End-User-Modelers is ownership in the models.

Only what they have modelled themselves is truly understood and trusted.

3: Scale up



Once the Domain-Experts owned the approach, they turned into ambassadors and leveraged the adoption throughout the whole team – and beyond!

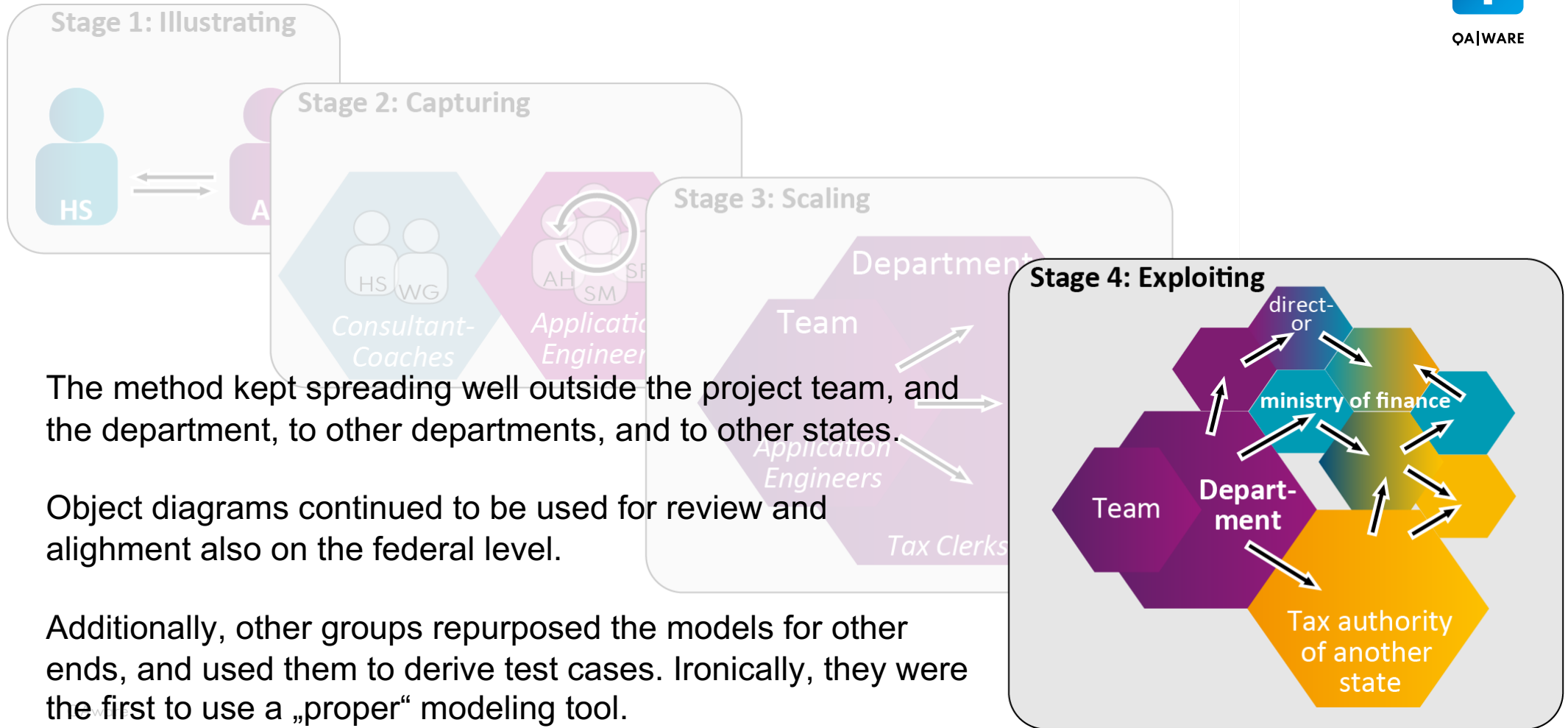
The collective knowledge raised the model quality to a new level.

Also, the object diagrams turned into a medium for review and alignment, and for specification.

4: Spread & Diversify



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Validity

What validity means for Action Research

Qualitative Research paradigms have different mechanics than the experimental paradigm.

Action Research in particular aspires to provide *'thick'* accounts of characteristic cases rather than universal quantification.

Therefore, different quality criteria apply.

- Relatability
- Thickness
- Transferrability

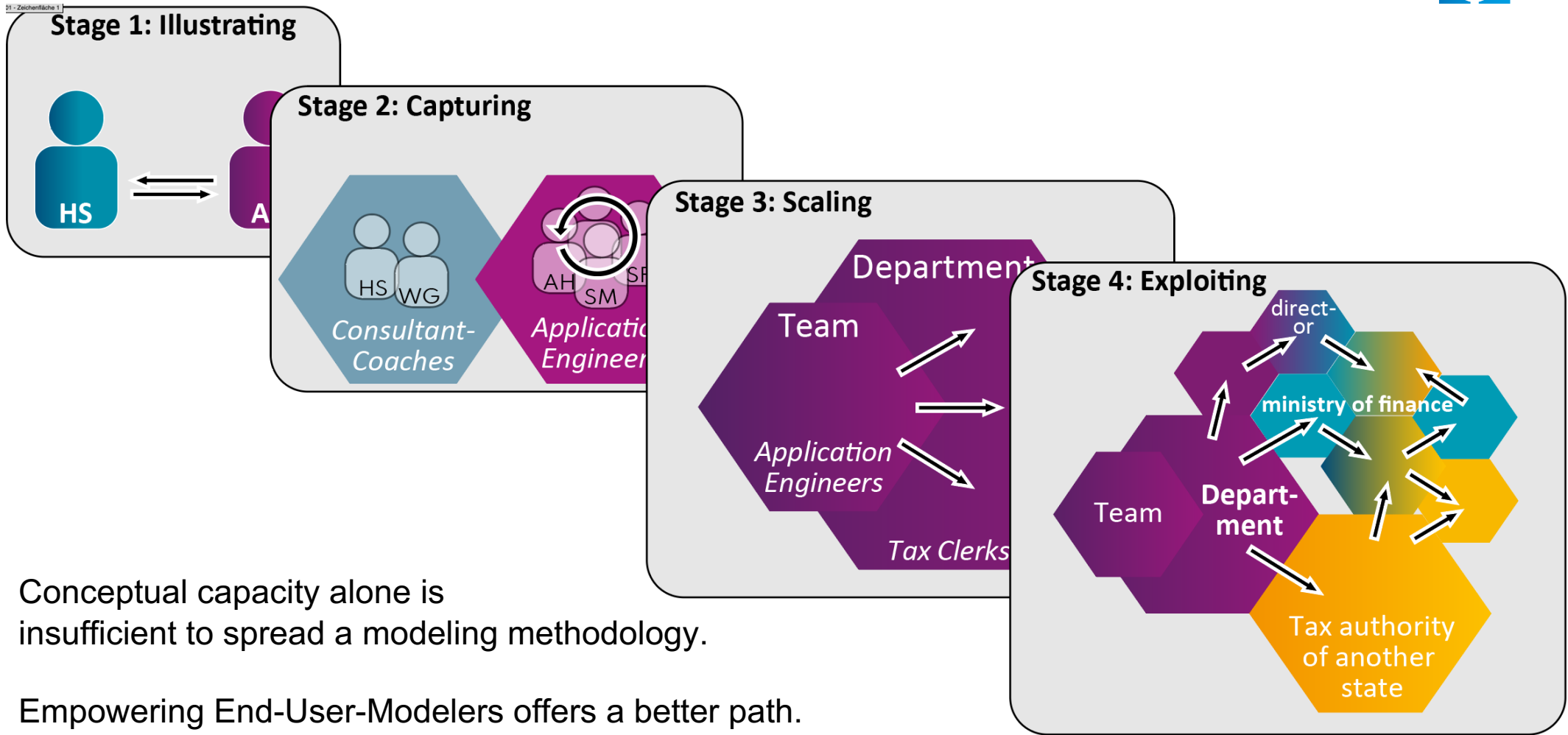
Action research is about the narrative as much as it is about the observations.

Validity questions for this study

This study...

- ...was not planned / has no control group/blinding / has too small n / has no experimental design / . . .
- ...invokes Action Research – is that even a thing?
- ...really puts a lot of emphasis on methodological questions, why would a scientific paper do that?
- ...took place in 2004/5 (sic), is it still relevant?
- ...is about a particular organisation, does it apply to others?
- ...happened a long time ago, how reliable is the account?

Summary



Conceptual capacity alone is insufficient to spread a modeling methodology.

Empowering End-User-Modelers offers a better path.



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Talk on MDE-Adoption in Industry
MASE-workshop tomorrow 11:00

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