

Exploring the RSE Landscape at HZDR


Initial Approach and First Results

Who are we?

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RSE and Consultant

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RSE and Trainer

What is the HZDR?

 Helmholtz-Center
Dresden-Rossendorf, Germany

 ~1500 (~900 scientists / PhD students)

 Physics: Energy, Matter,
Health: Cancer diagnostics / treatment

What?

Capture mood about RSE at HZDR

Why?

Aid in

- Decision-making,
- Education and consulting planning,
- Community building

How?

Not a "proper" survey

- Face-to-face interviews
- Guiding questions, but
- Focus on what they want to tell

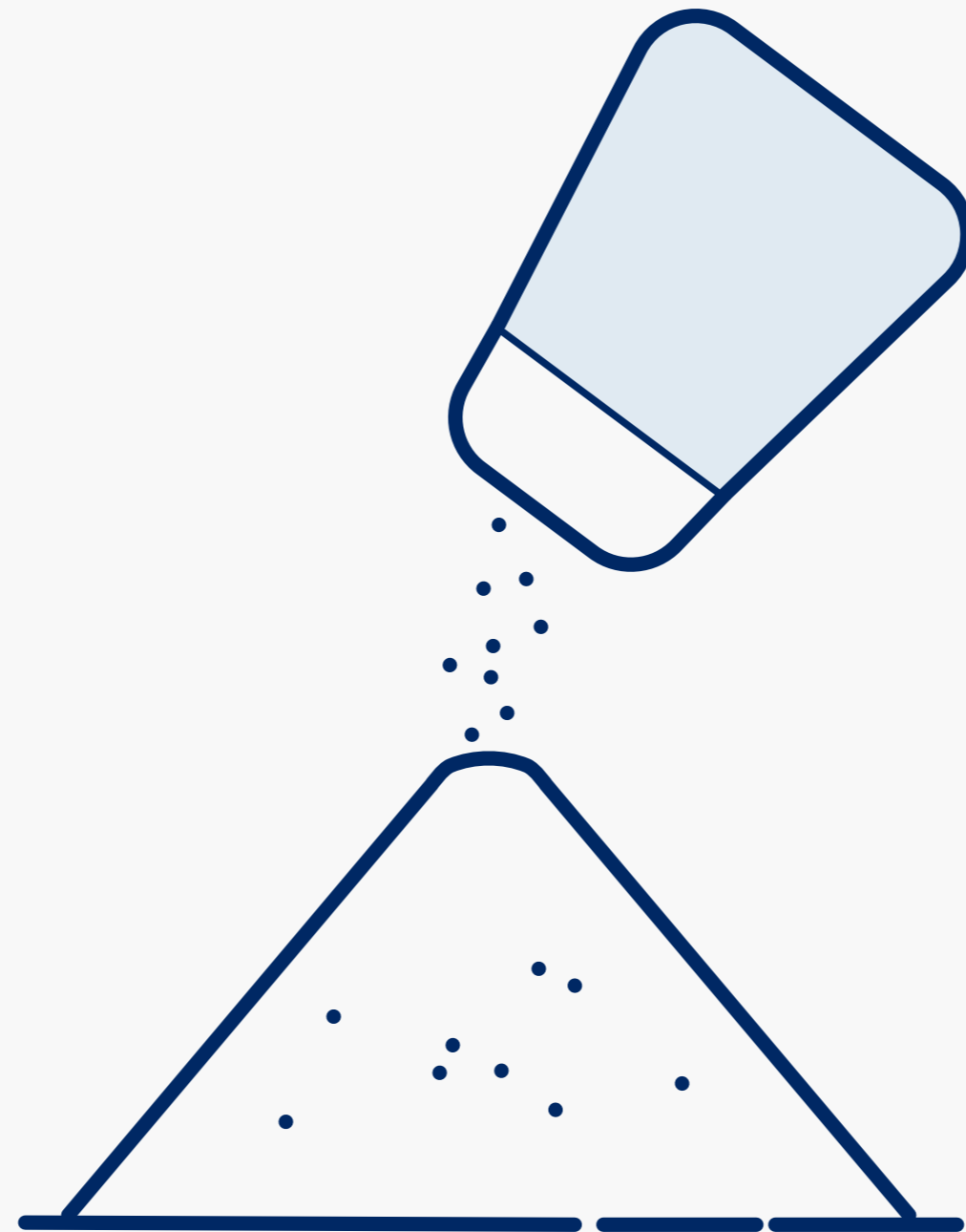
Challenge: Preserve Anonymity

Encourage to give honest opinion -
even if unpopular / controversial

- People tend to be well connected
- Recognition possible with small hints
- Only 10 interviews conducted so far

- Limit collected data to core thoughts
- Present data as a whole by topic
- Highlight similarities

Publishing interview notes...
... how to do it right?

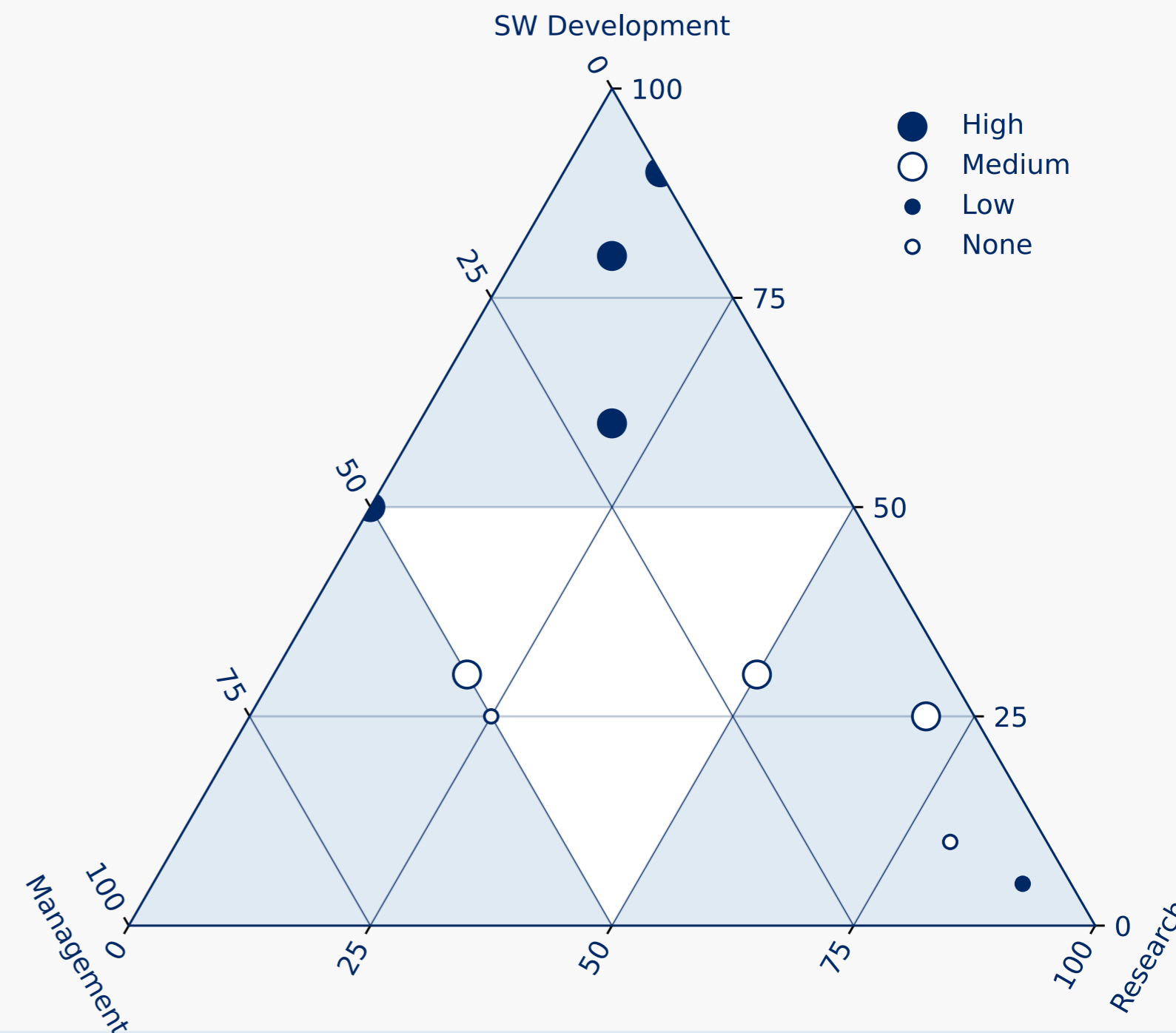


Structure of Work vs. Self-Perception as RSE

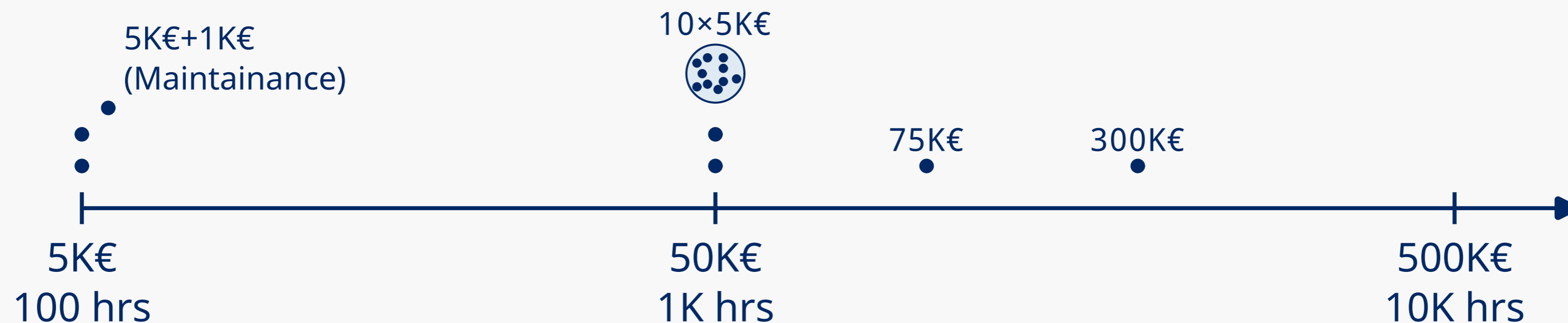
Would you consider yourself an RSE?

100% work day, how much is spent on

- Software Development
- Research
- Management



Research Software Contribution: Scale



Assuming 1 FTE = 2K hrs / year = 100K€

RSE Education - Current State

Learned where?

Self-taught	
University	
Rev. engineering	
On the job	

Obstacles

Insufficient docs/tutorials	
Lack of community	
How to gain experience	
Lack of time	



RSE Education - Demand

Form

Workshops |||

Mentoring ||

Video Courses ||

Hackathons ||

Community Sessions |

Content

- Git/ GitLab
- Packaging, Dependencies
- Containers, Ansible
- Testing
- UI/UX
- HPC, Parallelization
- ML, Data Science
- HW-SW-Integration
- Advanced C++
- Rust
- CUDA

Solutions to
domain-specific
problems

Challenges

- Sustainability
 - Funding, contracts
 - Lack of: QA, code infrastructure
 - Fast dev. cycles
- Lack of community & open exchange



- Lack of trust in SW-based research
- (Perceived) Lack of acknowledgement

? ← RS-dev. can be research in itself → ?

Opportunities

- Growing importance
- AI-assisted code generation
- Unique kind of SW
- Downstream application in industry

THANKS FOR YOUR ATTENTION

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