





Architecting for Tomorrow

A Pragmatic Perspective

Marcel Schutte @ Devoxx BE 2024

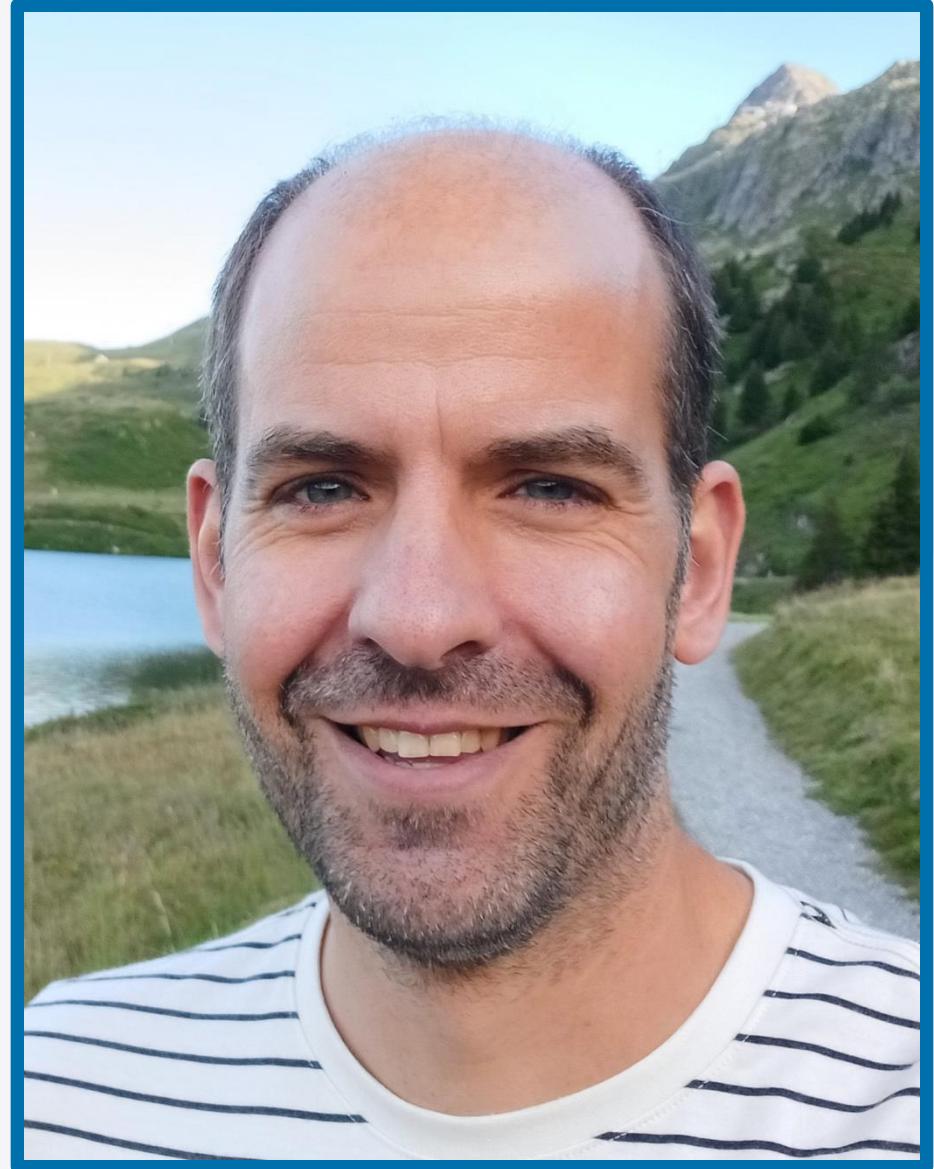




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Introduction

Times change...

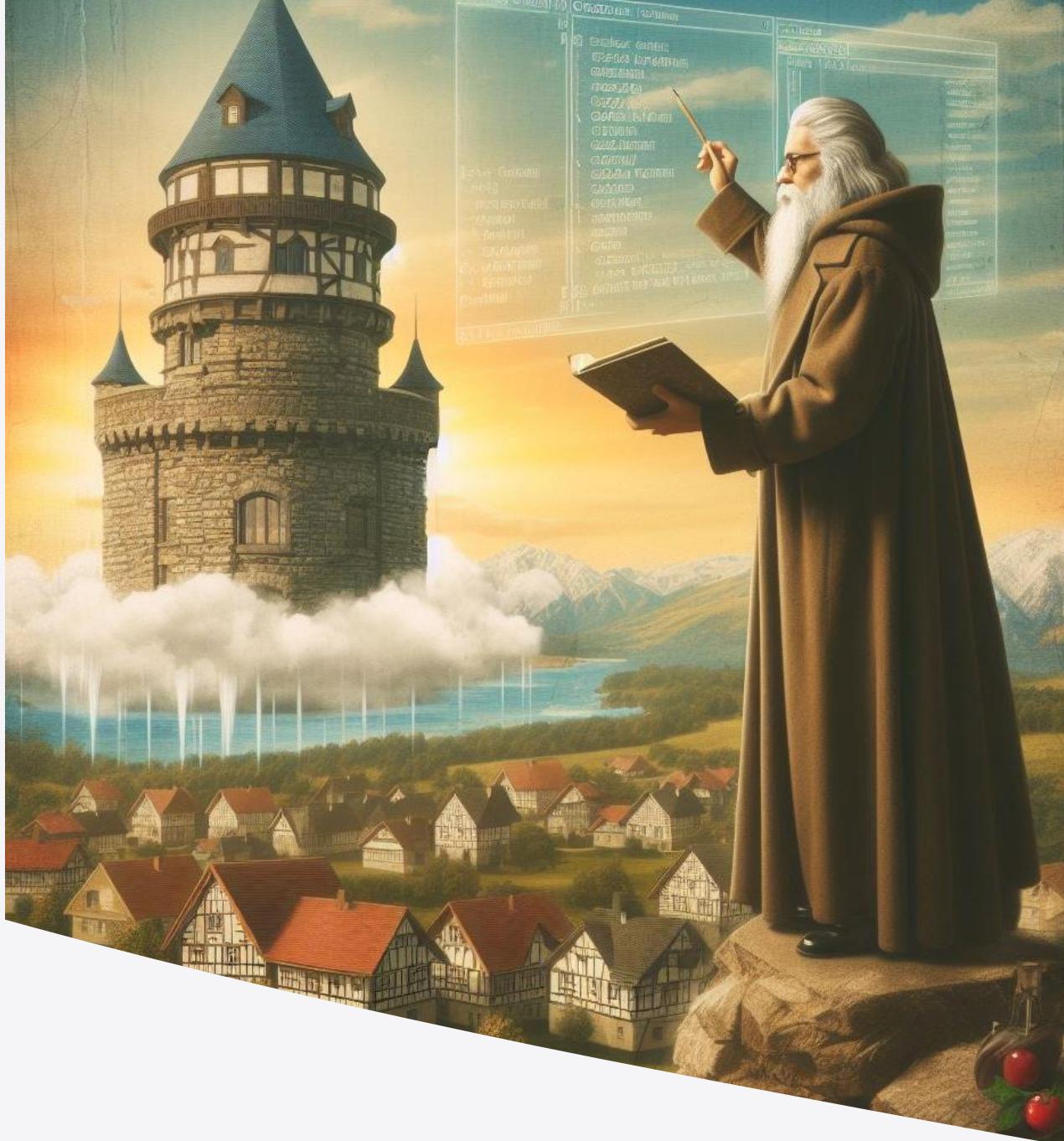


The role of architects has changed from trying to be the smartest person to making everyone else smarter.

Gregor Hohpe

The Ivory Tower

- Detached from everyday development process
- Creating the perfect end product
- Big Design Upfront
- Siloed, up in the Ivory Tower



Cracks in the Foundation

- Emergence of new technologies
- changing market demands
- Faster release cycles
- Greater adaptability
- Perfect was no longer good enough



Walls are crumbling

- The rise of Agile
- Emergence of new architectural styles
- Continuous Delivery & DevOps
- Definition of Software Architect evolves



The Pragmatic Architect

- Guide and facilitator
- Clear direction and guiding principles
- Tools and practices
- Resilient and adaptable architecture



The Architect as Leader

- Prioritizes collaboration
- Balance stability and evolvability
- Understanding business goals, technical constraints and the evolving software development ecosystem



Evolving Impact, Shape the Future

- Deeper understanding of organizational structures, communication patterns and business drivers
- Leader and change agent
- Connecting the technical with the strategical



Characteristics

Of a Pragmatic Architect

A woman in a dark suit stands in a futuristic, glowing environment. She holds a glowing blue cube in her right hand, which is surrounded by a complex network of glowing particles and light rays. The background is filled with abstract, colorful light streaks and digital icons, including a computer monitor, a smartphone, and a cloud storage icon.

A complex system that works is invariably found to have evolved from a simple system that worked.

John Gall

Ivory Tower to Collaborative Guide

Past:

- Isolated figures, focused on creating detailed technical specifications in a top-down manner.

Present:

- Collaborative and pragmatic approach to software architecture.

Future:

- Guide and facilitator



Embracing Change

- Change is inevitable
- Create framework
- Fitness Functions



Collaboration and Communication

- Prioritize clear and open communication
- Engage with developers, business stakeholders and other architects
- Use tools like ADRs for traceability, transparency and accountability



Balancing Vision with Practicality

- Technical ideals vs. Real-world constraints
- Elegant solutions that are also practical maintainable and deliver value
- Ultimate goal is to support the success of the business



Continuous Learning & Adaptation

- Change is the constant
- Continuous learning
- Re-evaluate assumptions
- Learn from mistakes/experiences
- Adapt to the ever changing digital landscape



Skills

Of a Pragmatic Architect



Omitting noise and focusing on the essence requires abstraction - one of the major skills architects should possess!

Gregor Hohpe

Evolving skillset

- More than a technical expert
- Communicators, collaborators, negotiators and leaders
- Essential for navigation complexities of modern software development



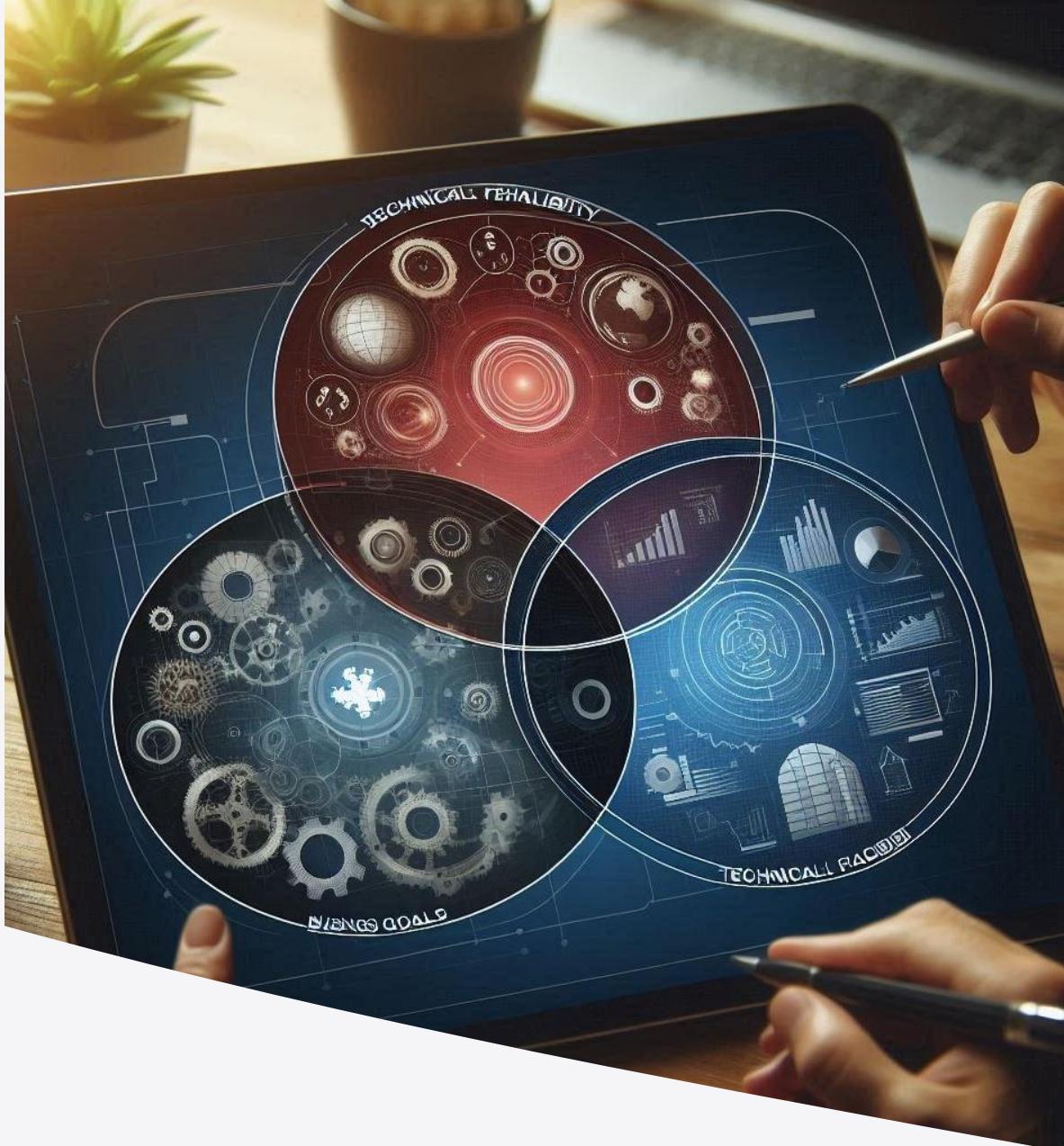
Communication and Collaboration

- Bridge the gap between technical and business worlds
- Clear concise communication is key
- Visual aids, real-world examples, and jargon-free explanations



Negotiation and Facilitation

- Mediate between stakeholders
- Active listening
- Identifying shared goals
- Exploring compromises
- Solutions that balance business needs with technical realities



Guiding Architectural Vision

- Inspire and empower
- Clearly communicate vision and the “why”
- Foster culture of learning
- Encourage experimentation and adaptation



Embracing Evolutionary Design

- Continuous process of evolution
- Design adaptable systems
- Prioritise modularity, loose coupling and well-defined interfaces



The Power of Storytelling

- Using narratives to communicate complex ideas
- Can help understand the “why”
- Use case scenarios, success stories, failure stories are powerful ways to convey architectural vision



Adaptive decision making

- Decisions based on incomplete information
- Involves gathering information, evaluating options, making informed choices and iterating based on feedback
- Architectural Decision Records
- Experimentation and learning



Tools

Of a Pragmatic Architect



The tools we use have a profound influence on our thinking habits, and, therefore, on our thinking abilities.

Edsger Dijkstra

The Toolkit of a Pragmatic Architect

- Diverse toolkit
 - Software, methodologies and frameworks
 - ADR's, Fitness Functions and Diagramming tools



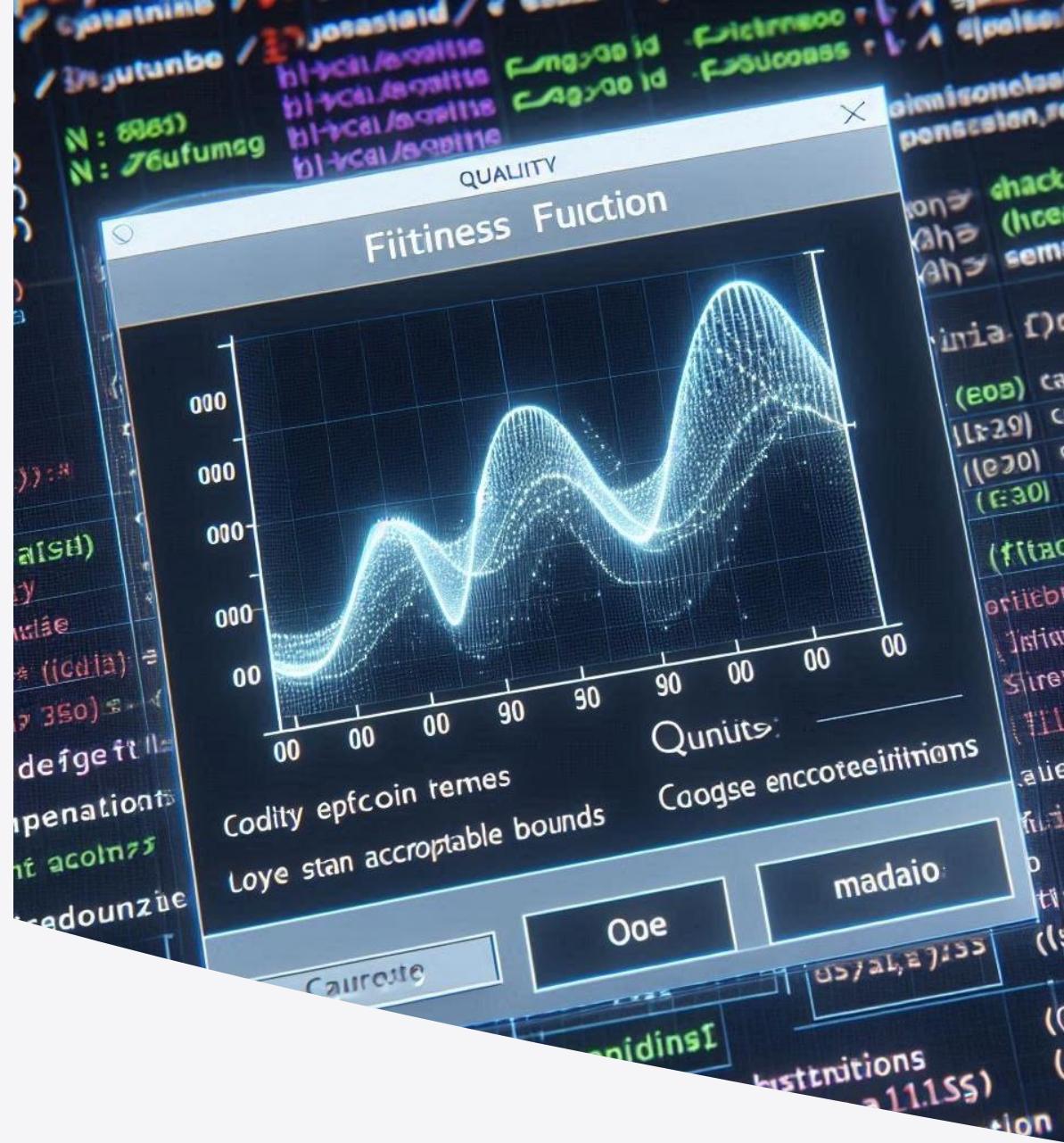
Documenting the 'Why'

- Architecture Decision Record
- Ensure traceability, preserve the rational behind choices
- Standard template
- Markdown
- Version control



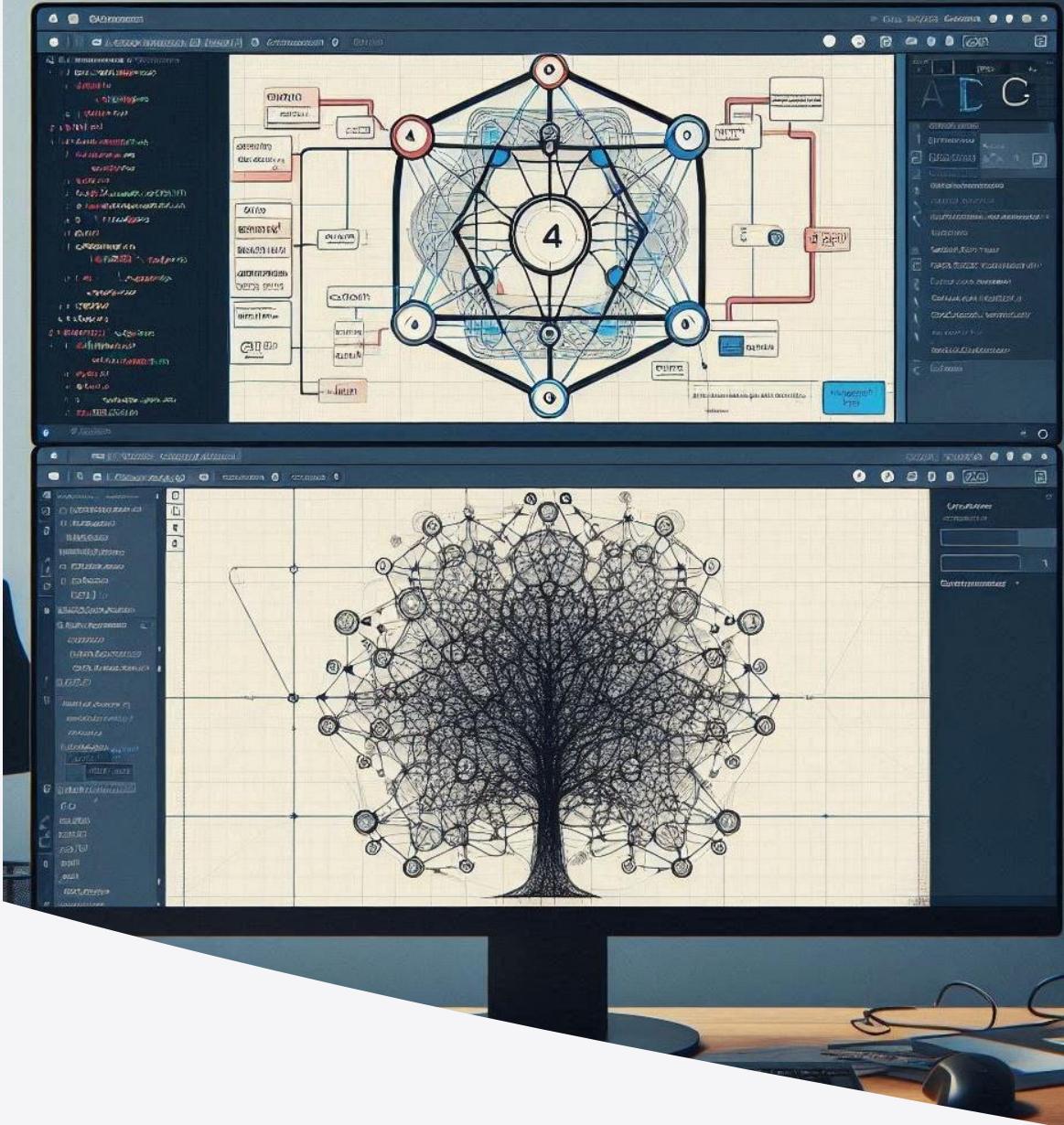
Fitness Functions

- Automated guardians of architectural characteristics
- Monitor codebases for violations of architectural principles



C4 - Communicating Your Vision

- Clear and Concise diagrams
- Lightweight and effective diagramming
- Different levels of detail/abstractions
- Technical and non-technical



C4 & Structurizr

- Create and manage C4 models
- Structured and maintainable
- Textbased
- Version control
- Empowers agile development teams to maintain accurate and up-to-date documentation



A photograph of a modern building's glass facade. The glass panels reflect the bright blue sky and scattered white clouds. The perspective is from below, looking up at the building's corner.

Pragmatic Architect

A Bridge Builder and Guide

- More than code/lines-and-boxes
- Bridging Worlds
- Guiding Vision
- Storytelling for Success



From Decisions to Visualisation

- Documenting Decisions
 - Guiding Evolution
 - Visualising Complexity
 - Agile Documentation



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Pragmatic Architect

Thank you for your attention!

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<https://github.com/marceljschutte/slidedecks>

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