

Architecture Communication Canvas

**Useful Architecture Documentation
in 60 45 Minutes**

INNOQ



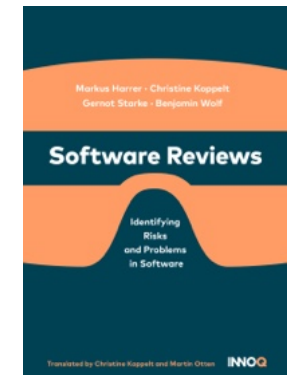
BENJAMIN WOLF
@BEN@INNOQ.SOCIAL

**„Jedes Problem lässt
sich mit gutem
Kaffee lösen.“**

Benjamin Wolf

**Senior Consultant / Coffee Consultant
bei INNOQ**

Consultant für Architekturentwicklung / -dokumentation
Trainer für iSAQB Foundation, IMPROVE und ADOC
arc42-Fan und -Maintainer
Kaffeegenusspecht



architecther.co.uk



Why
this topic?



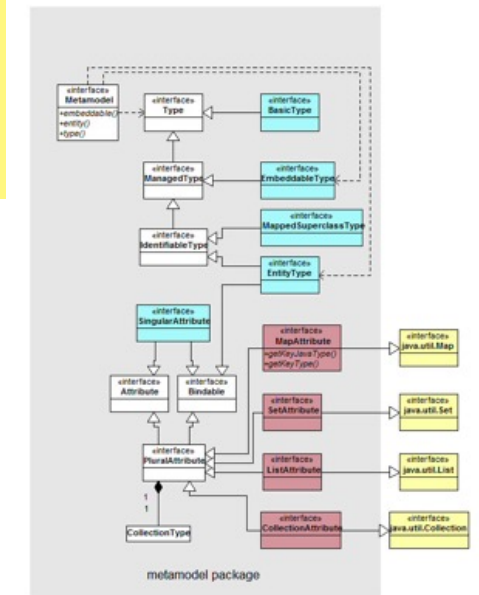
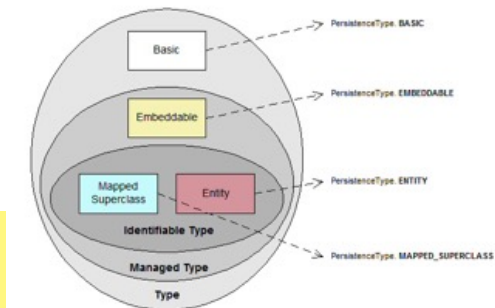
The Endless Void ...



Nobody Finds a Thing

image by DALL.E

Documentation as Denial-of-Service Attack



Assumption

You

- need* to document
- have limited time

* if we were younger and naive, we would have written „want“

Agenda



ACC

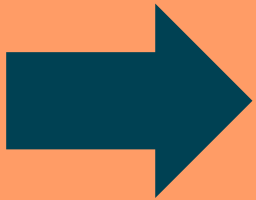
arc42 in a nutshell

What is a Canvas?

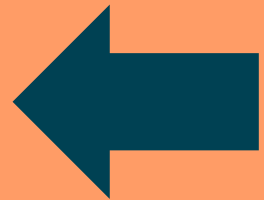
Agenda

ACC

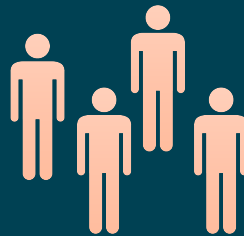
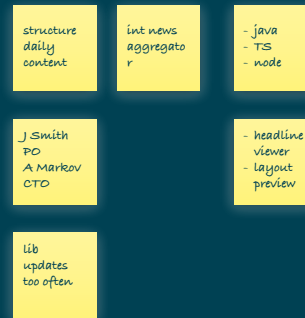
arc42 in a nutshell



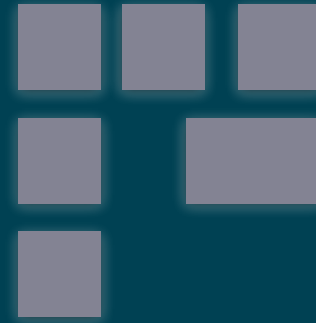
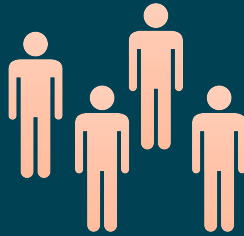
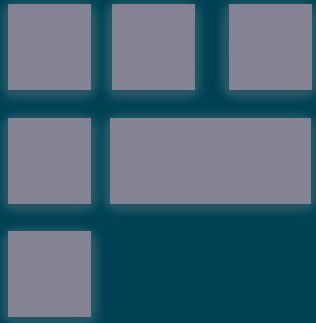
What is a Canvas?



once upon a time...

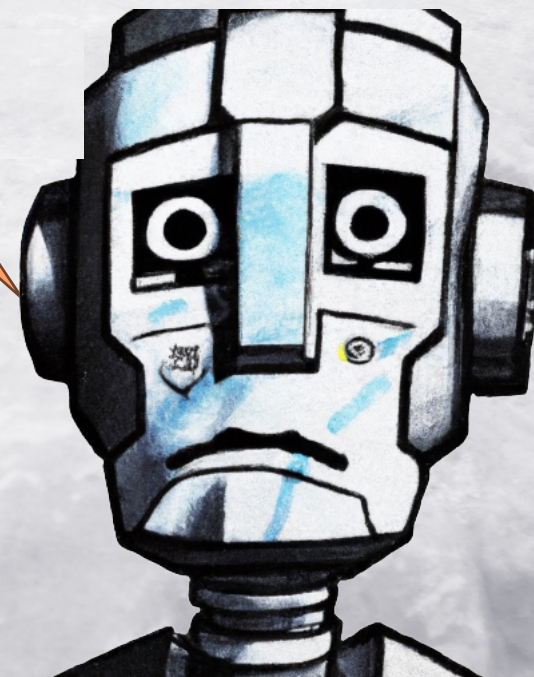


once upon a time...

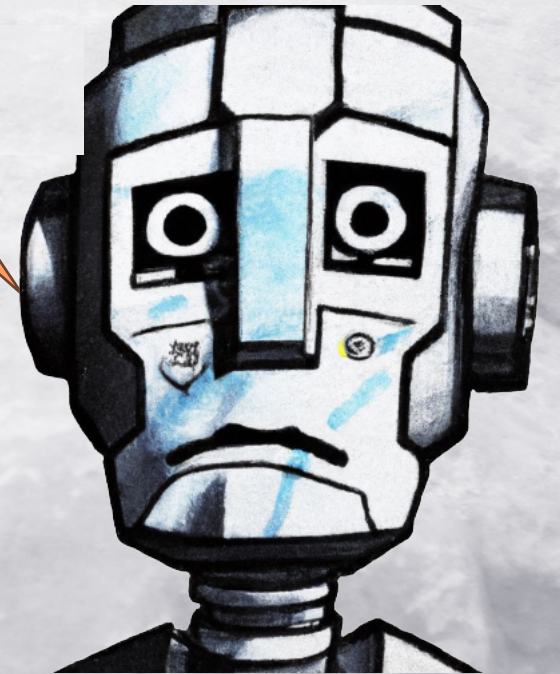


Can-what?

wtf?



what?



Canvas
[en: KannWas]

Canvas (1)



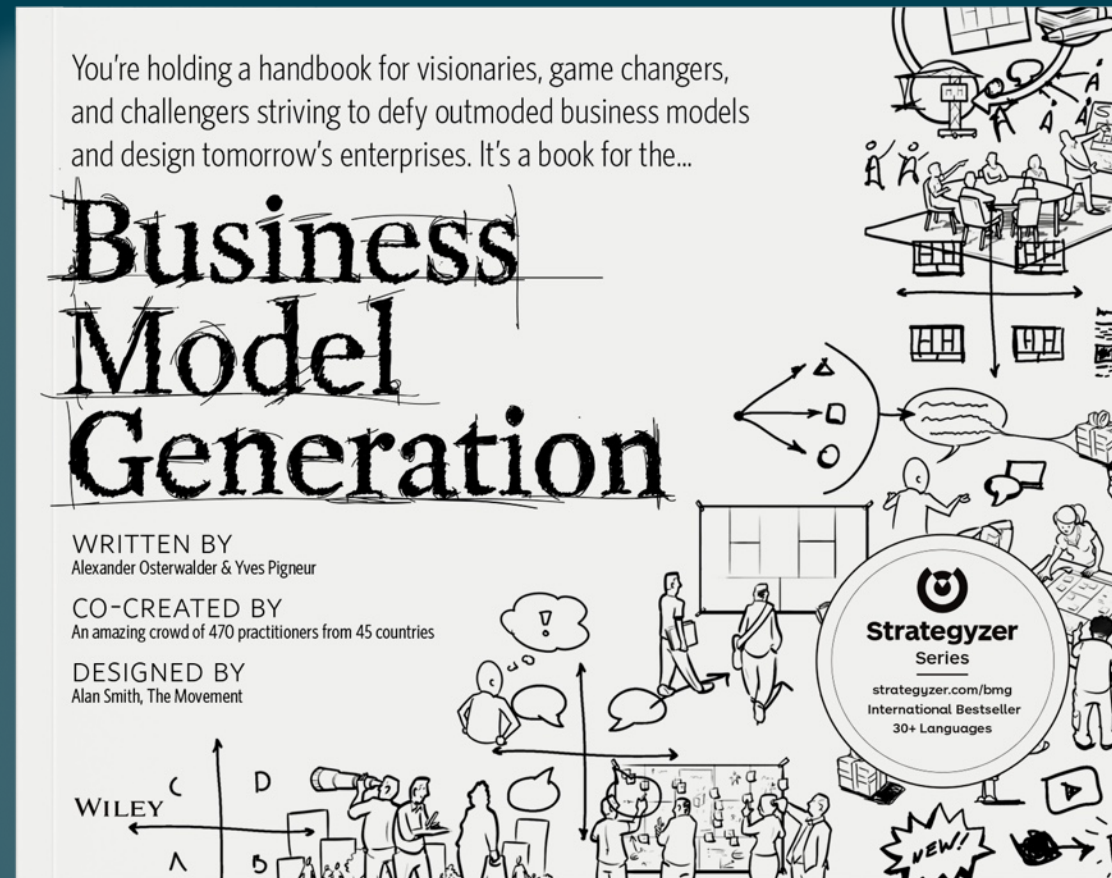
In software engineering, a canvas typically refers to a visual container where users can interact and manipulate elements to create or modify content.

Canvas (2)

... A canvas is a structured visualization that facilitates understanding and analysis of key elements of specific topics..



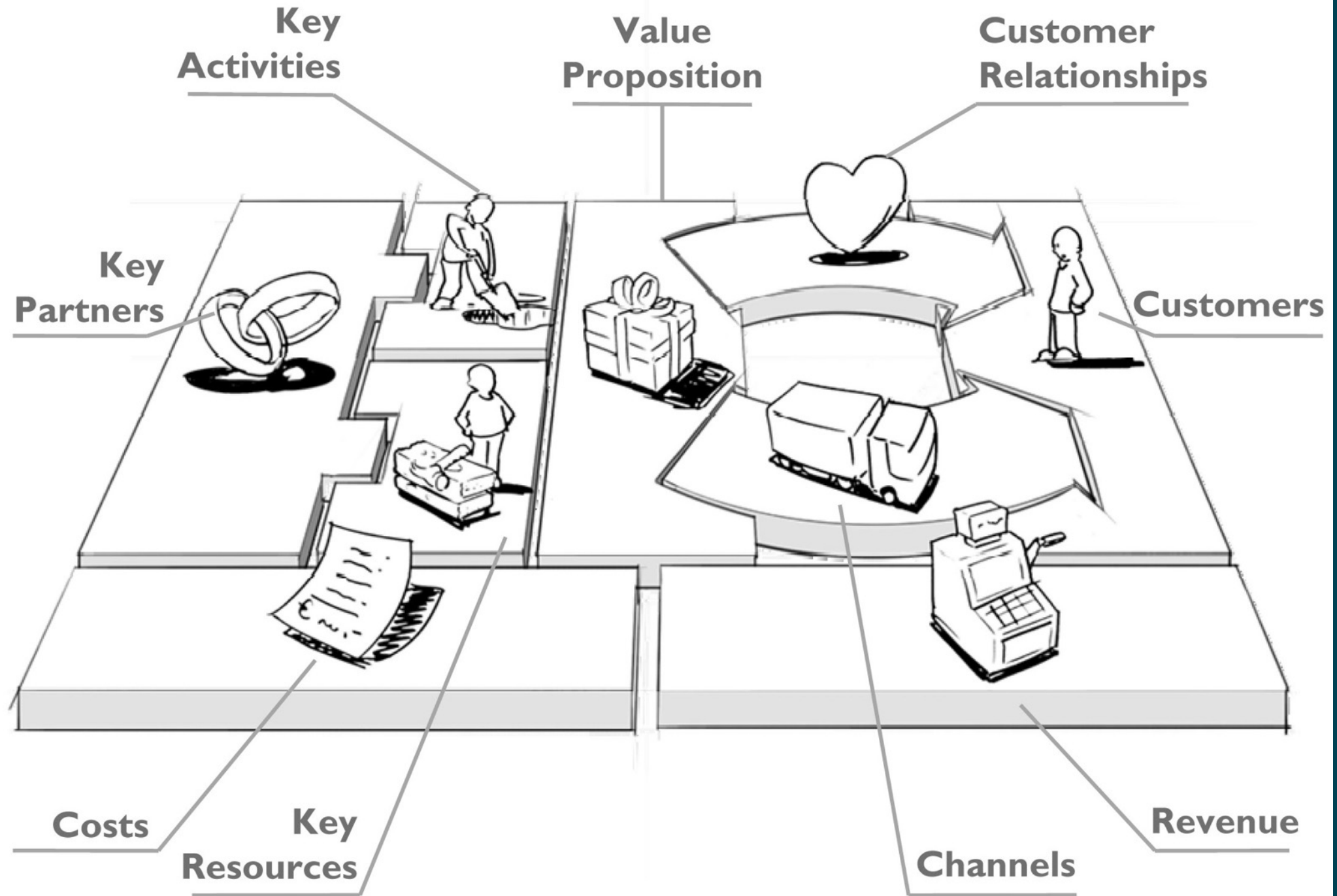
Business Model Canvas



WOW!

Business Model Canvas

<https://www.projectwizards.net/en/blog/2019/09/business-model-canvas>



drawings by JAM

Business Model Canvas

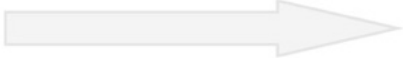
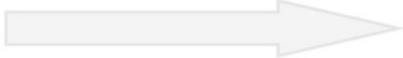
The Business Model Canvas		Designed for:		Designed by:		Date:		Version:	
Key Partners 	Key Activities 	Value Propositions 	Customer Relationships 	Customer Segments 					
	Key Resources 		Channels 						
Cost Structure 			Revenue Streams 						

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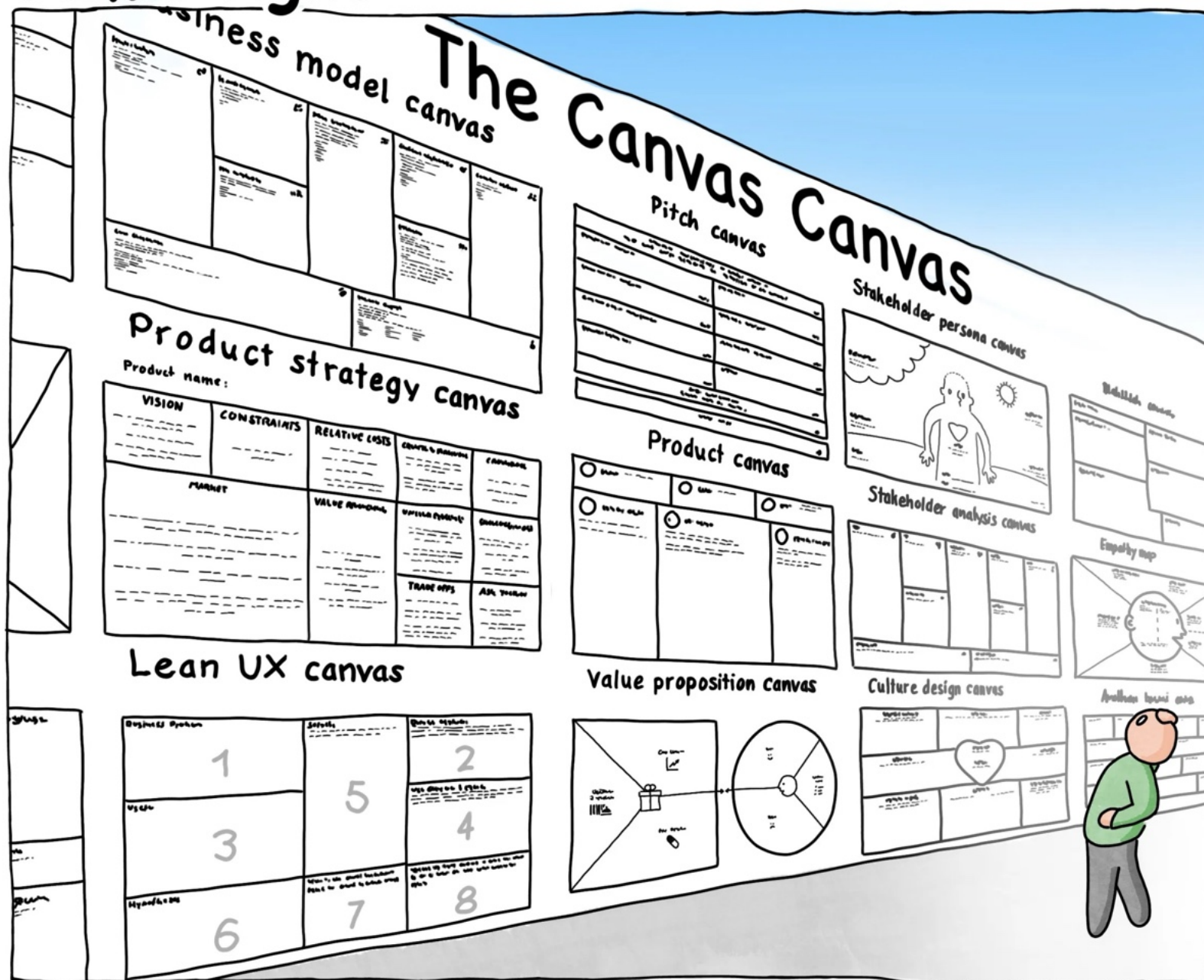
DESIGNED BY: Strategyzer AG
The makers of Business Model Generation and Strategyzer

 **Strategyzer**
strategyzer.com

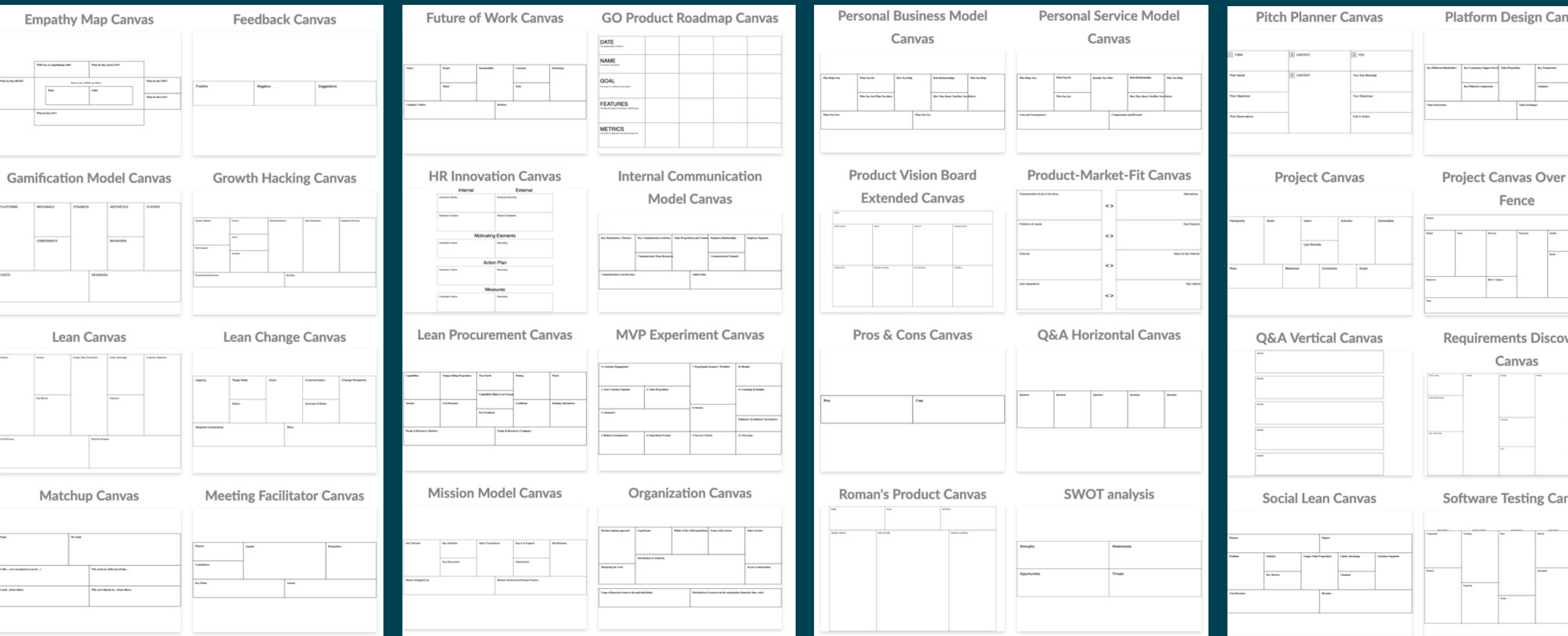
Bounded Context Canvas

Name:		V5 github.com/ddd-crew/bounded-context-canvas						
Purpose What benefits does this context provide, and how does it provide them? Describe the purpose from a business perspective		Strategic Classification <table border="0"><tr><td>Domain - core - supporting - generic - other? </td><td>Business Model - revenue - engagement - compliance - cost reduction </td><td>Evolution - genesis - custom built - product - commodity </td></tr></table>		Domain - core - supporting - generic - other?	Business Model - revenue - engagement - compliance - cost reduction	Evolution - genesis - custom built - product - commodity	Domain Roles Role Types - draft context - execution context - analysis context - gateway context - other	
Domain - core - supporting - generic - other?	Business Model - revenue - engagement - compliance - cost reduction	Evolution - genesis - custom built - product - commodity						
Inbound Communication Collaborator Messages		Ubiquitous Language Context-specific domain terminology Business Decisions Key business rules, policies, and decisions				Outbound Communication Messages Collaborator		
								
Assumptions Describe which currently unverified assumptions went into this bounded context design. Make those assumptions explicit by documenting them here		Verification Metrics Describe metrics which can be used to (in)validate the current structure of this bounded context?		Open Questions				

Comic Agilé



many more ...



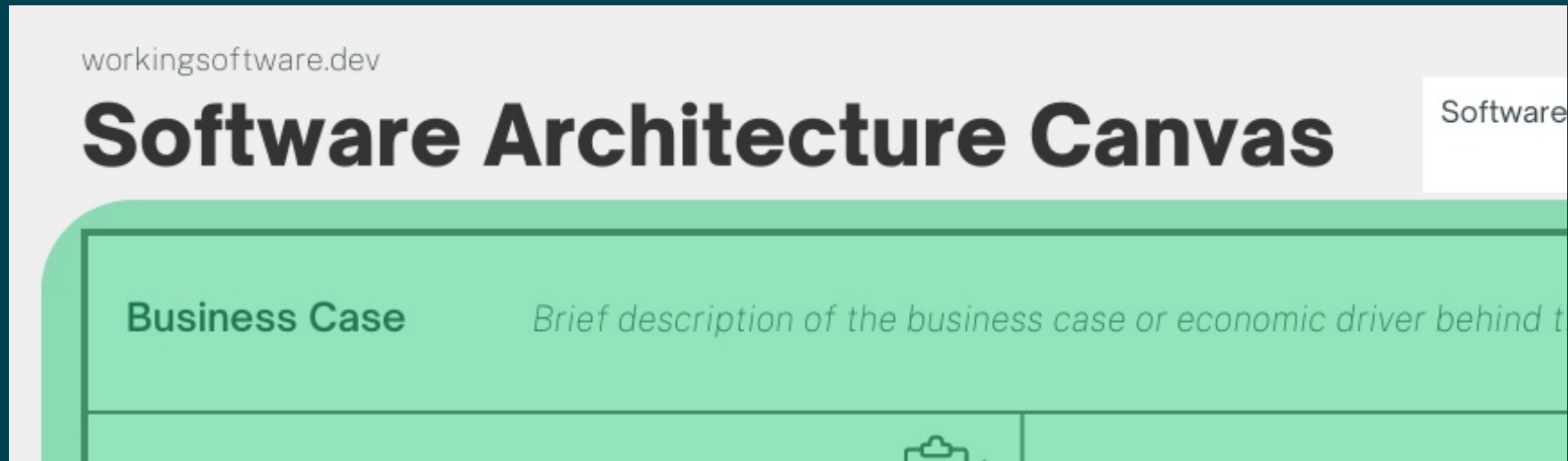
Why not ...

Why not ...

create our own
canvas?

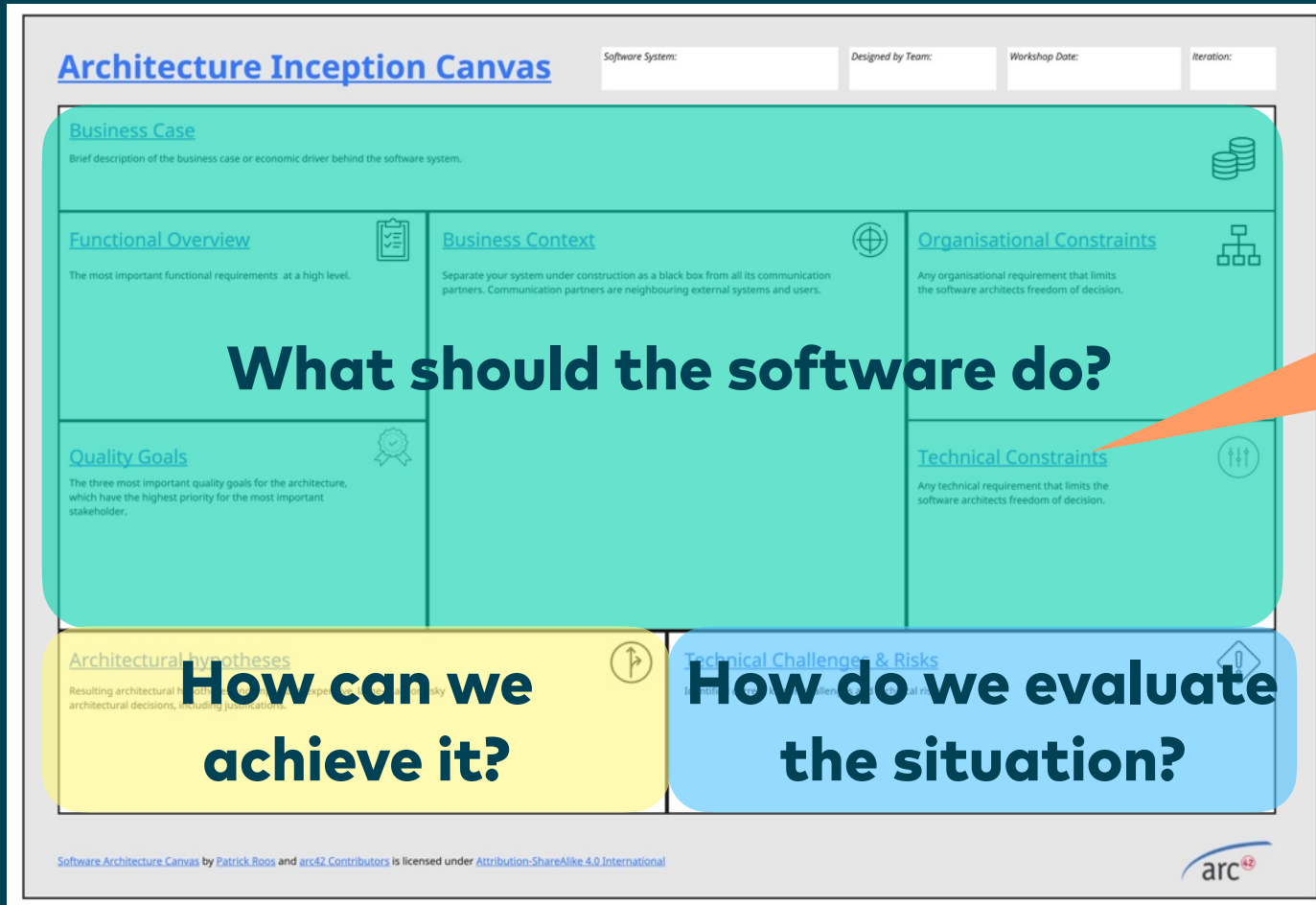
Software Architecture Canvas

Oh, snap!!



<https://www.workingsoftware.dev/software-architecture-canvas/>

Thanks, Patrick!



for
new systems



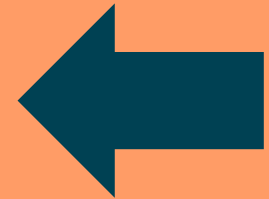
<https://canvas.arc42.org/architecture-inception-canvas>

Agenda

ACC



arc42 in a nutshell



What is a Canvas?

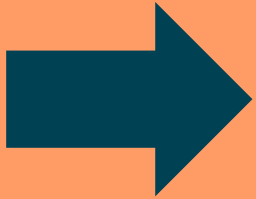


**arc42 has
12 "shelves"**

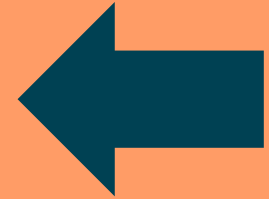
arc42 in a nutshell



Agenda



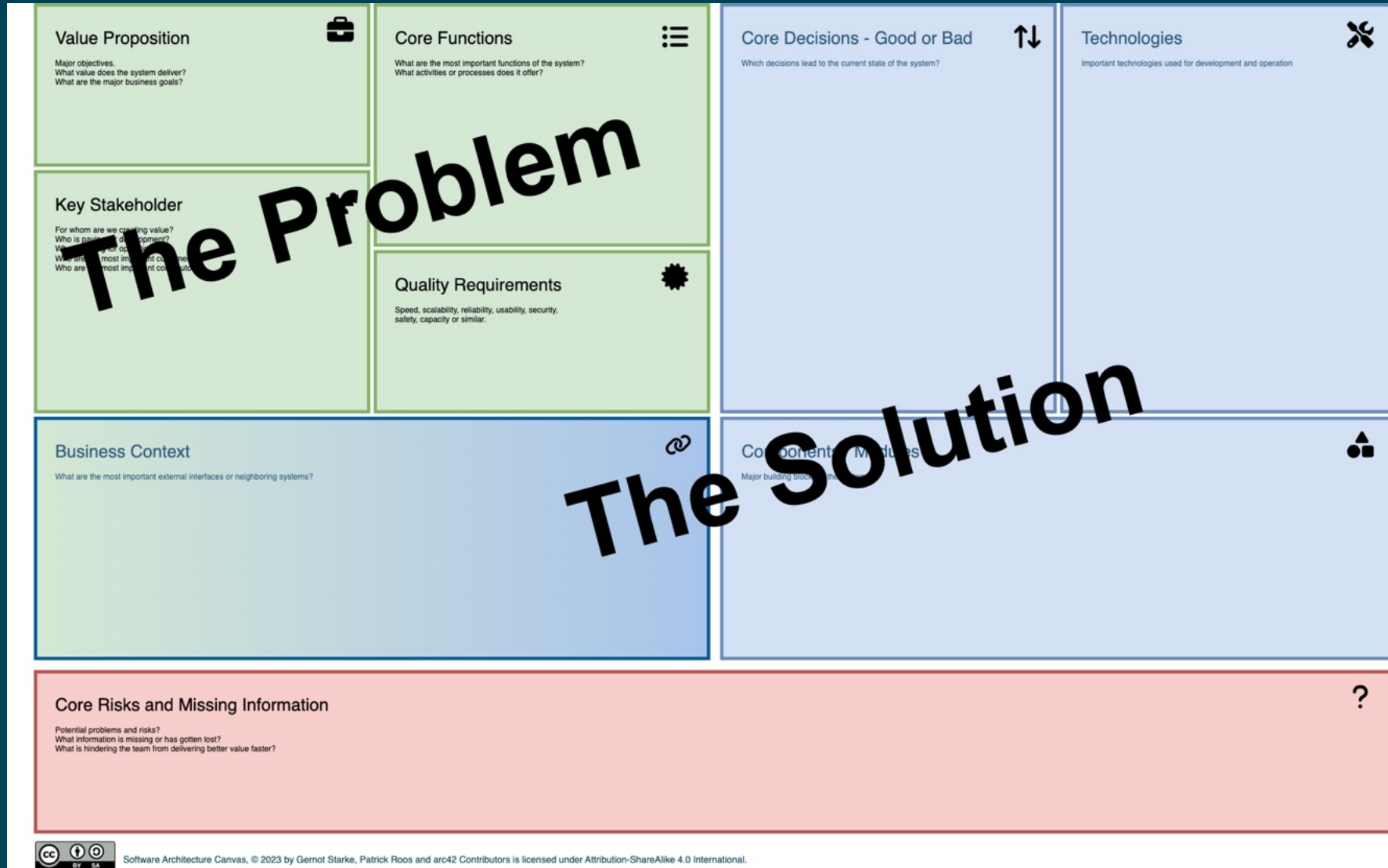
ACC



arc42 in a nutshell

What is a Canvas?

Structure of the Canvas





Architecture Communication Canvas

System:

Created by:

Created for:

Date / Iteration:

Value Proposition



Major objectives.
What value does the system deliver?
What are the major business goals?

Core Functions



What are the most important functions of the system?
What activities or processes does it offer?

Core Decisions - Good or Bad



Which decisions lead to the current state of the system?

Technologies



Important technologies used for development and operation

Key Stakeholder



For whom are we creating value?
Who is paying for development?
Who is paying for operations?
Who are our most important customers?
Who are our most important contributors?

Quality Requirements



Speed, scalability, reliability, usability, security,
safety, capacity or similar.

Business Context



What are the most important external interfaces or neighboring systems?

Components / Modules



Major building blocks of the system

Core Risks and Missing Information



Potential problems and risks?
What information is missing or has gotten lost?
What is hindering the team from delivering better value faster?



Use Canvas for: Reviews

- Create canvas prior to review
- Common understanding
- Remind participants of „everything“



Use Canvas to: Kickstart

- Fastest possible start
- Avoid blank-paper syndrome



Use Canvas in: an Emergency

- Fastest possible documentation
- If nothing else works...

ACC

Examples

Value Proposition



MaMa is a multi-tenant SAAS platform to produce e-health cards for insurance companies, providing maximum flexibility with regards to data formats and business rules.

Core Functions



- SAAS to create eHealth cards
- Get photo from insured person
- 2nd level support for eHealth data acquisition process

Core Decisions - Good or Bad



- + operate MaMa as SaaS
- + domain-specific configuration
- + one tenant per VM
- + 100% generated persistence, incl. DB

- batch only data transfer
- ProcessControl subsystem violates SoC

Technologies



- Eclipse RCP frontend
- JBoss Drools rule engine
- Quartz scheduler
- Oracle DB
- Dedicated server, with Linux KVM hypervisor

Key Stakeholder



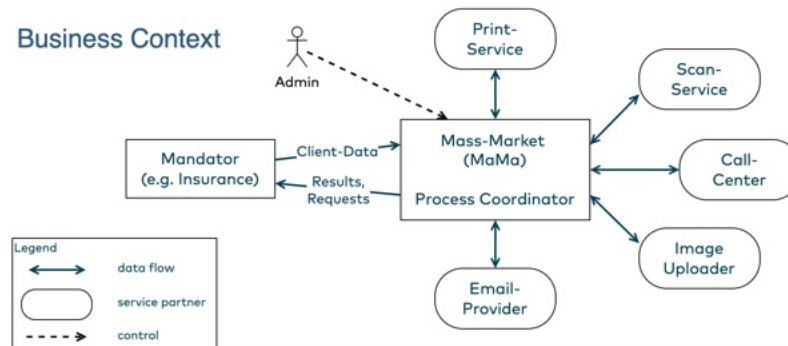
- Hosting Provider
- Tenants: health insurance companies
- Government regulation body (Gematik GmbH)
- DRV B Rentenversicherung Bund
- Print service provider
- Scan service provider
- G&D card issuer
- TÜV (auditor)
- BSI (auditor)

Quality Requirements



1. Strict separation of tenant data
2. New data always processed until end of business day

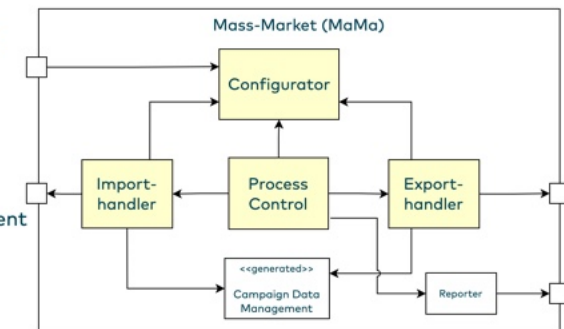
Business Context



Components / Modules



- Configurator
- Import handler
- Export handler
- ProcessControl
- (generated) Campaign DataManagement



Core Risks and Missing Information



- Outdated UI (Eclipse RCP)
- Batch strategy limits acceptance
- No end-user self-service options

Salary Management



Architecture Communication Canvas

System:

gehalt.io

Created by:

Ben Wolf

Created for:

Dev Team

Date / Iteration:

5. Feb 2025 / 3

Value Proposition



- Adjust salary per employee
- Compare salaries
- Prevent a pay gap
- Less errors due to less manual steps

Core Functions



- Create, edit and approve agreements
- Create and edit benefits
- Compare salaries of employee groups
- View your own agreement and your agreement history

Core Decisions - Good or Bad



- + SpringBoot + ecosystem as core framework
- + PostgreSQL database
- + Test-driven development approach

o Liquibase for db schema management

- JavaScript libraries for visualisation
- Translating terms to English instead of using Ubiquitous Language (German)
- Secure but complex deployment to AWS

Technologies



- Gradle 8
- Spring Boot 3
- Java 17
- junit 5
- Thymeleaf
- Node 18
- Vega, D3, Faucet (js libraries)

- AWS (Cognito, S3, SES, ECS, Lambdas)

Key Stakeholder



- Executive Board
- Back office
- Employees

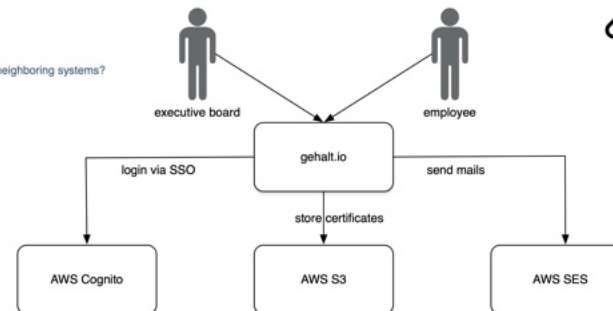
Quality Requirements



1. Project members can easily be exchanged (Maintainability)
2. An INNOQ employee must not see someone else's info (Security)
3. The software is available during staff appraisals (Reliability)

Business Context

What are the most important external interfaces or neighboring systems?



Components / Modules



- AgreementManagement
- BenefitManagement
- EmployeeManagement
- Audit
- AccessControl
- Notifications

Core Risks and Missing Information



- Limited access to development resources
- Better existing (SaaS) solutions available?
- Deployment tends to be too complex



Software Architecture Canvas, © 2023 by Gernot Starke, Patrick Roos and arc42 Contributors is licensed under Attribution-ShareAlike 4.0 International.

<https://canvas.arc42.org>

Value Proposition

Show detailed aggregate statistics of visitors and pageviews of all arc42 websites.

Key Stakeholder

- arc42 comitters
- users of arc42 website(s)
- web developers

Core Functions

- show detailed statistics for every arc42 website (.de, .org, docs, faq, canvas, quality and status)
- show issues/bug counters

Quality Requirements

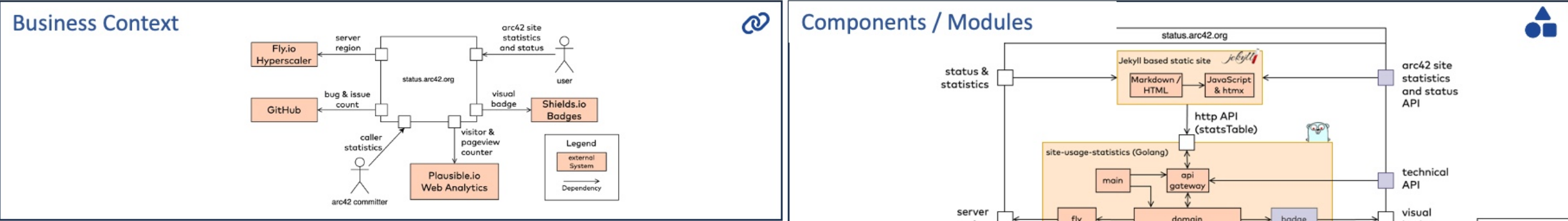
- accurate results
- simple visualization
- all relevant data at a glance

Core Decisions - Good or Bad

- + static site generator (Jekyll, Github pages) for main site
- + use https:// plausible.io to collect usage data
- + use fly.io for deployment
- + use Golang to wrap statistics service
- just ONE slow request to create HTML table (>3500ms)

Technologies

- Markdown + plain HTML
- Golang with packages
 - net/http, http/template
 - zerolog
- htmx to perform DOM manipulation at runtime
- fly.io for deployment



Risks and Missing Information

unknown user expectation

Legend

Component

planned

Dependency

ACC

Experience Reports

A professional recording studio setup. In the foreground, a light-colored desk holds a blue mug, a professional microphone on a stand, and a silver laptop. The background features dark, textured acoustic panels on the wall and ceiling. To the right, a large white softbox is visible, along with a boom arm and other studio equipment. The lighting is soft and focused on the desk area.

*Sounds great, but:
What do actual users
say about it?*

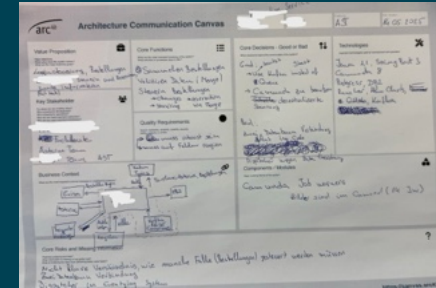
"Wow, that was fast!?"

*"Great,
now I don't have to talk
to people anymore!"*

*"First time documenting
architecture – and
I really enjoyed it!"*

"I never understood technical stuff, but this canvas? It helps A LOT!"

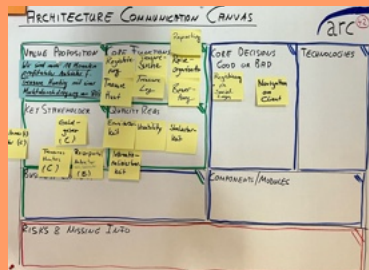
*One person presented
a (hand-written)
canvas to the team.*



*Within minutes,
a technical deep-dive began.*

*Team had to solve a
difficult problem.*

*Someone suggested the canvas.
Team happy and successful.*

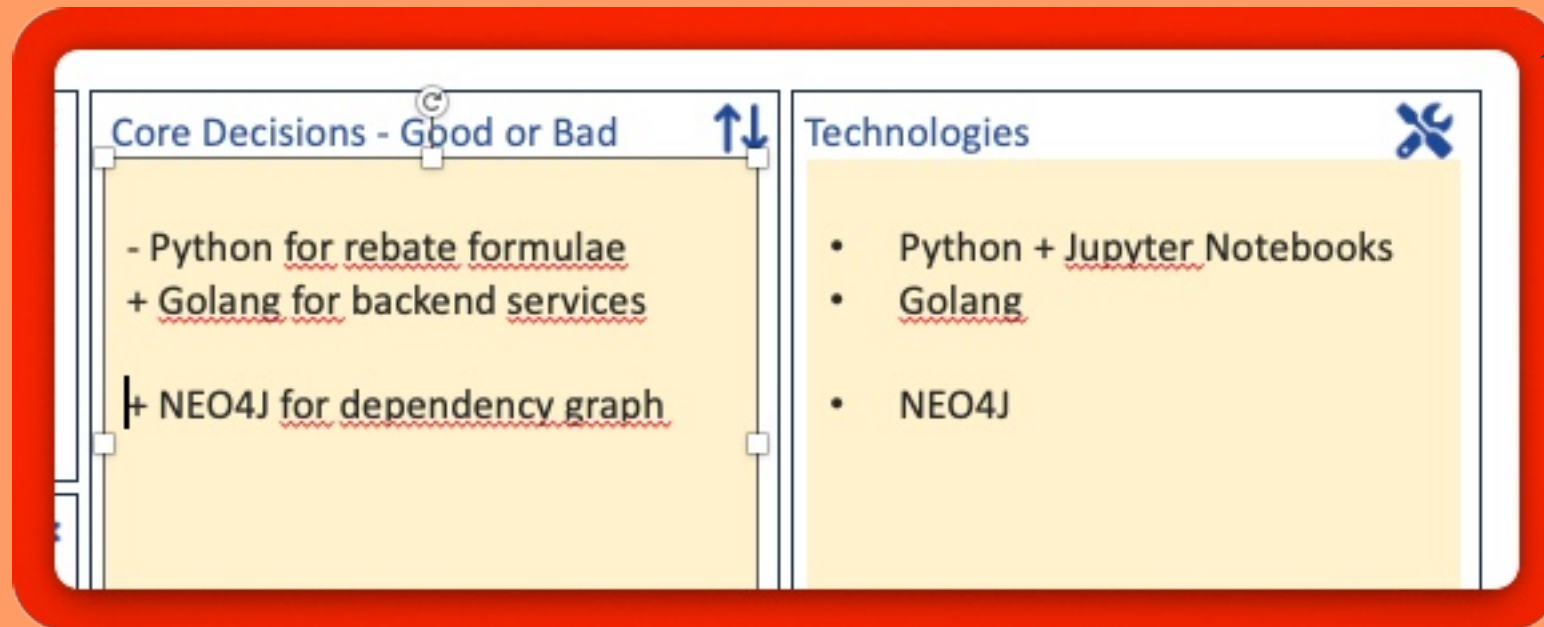




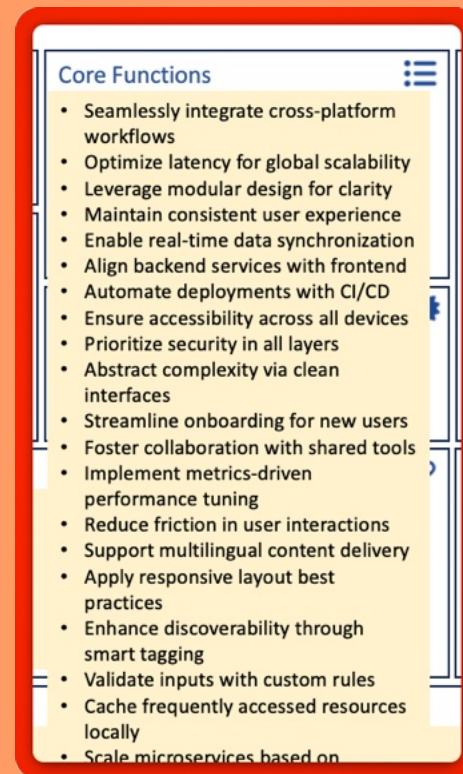
*Surely **SOMETHING**
didn't work out?*

People confused „Decisions“ and „Technologies“

fake sample



*Too verbose, aka:
„People can't be brief.“*



fake sample

Things that **didn't** work out

Infrastructure

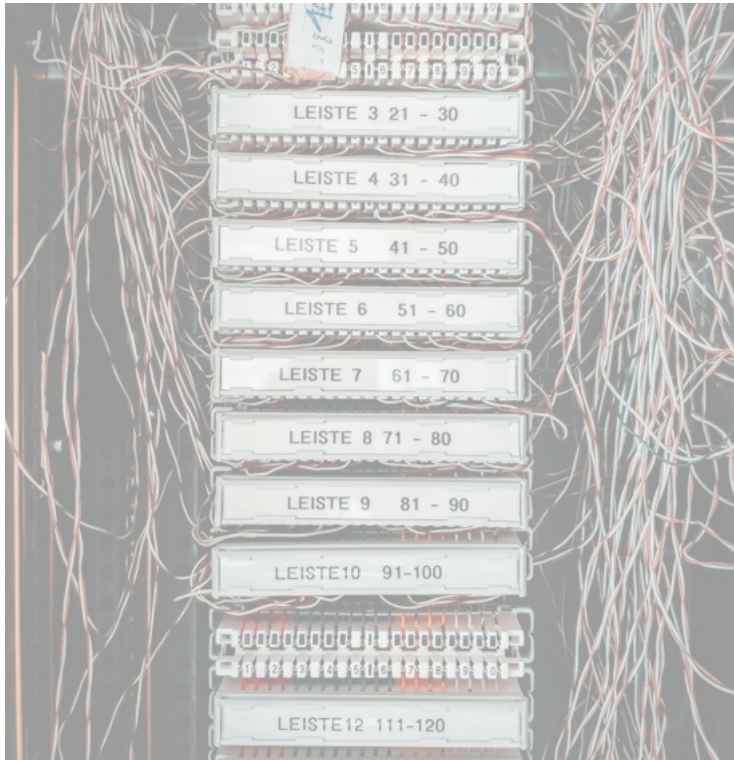


Photo by [Mika Baumeister](#) on [Unsplash](#)



ATLASSIAN
Confluence

<https://atlassian.design/foundations/logos>

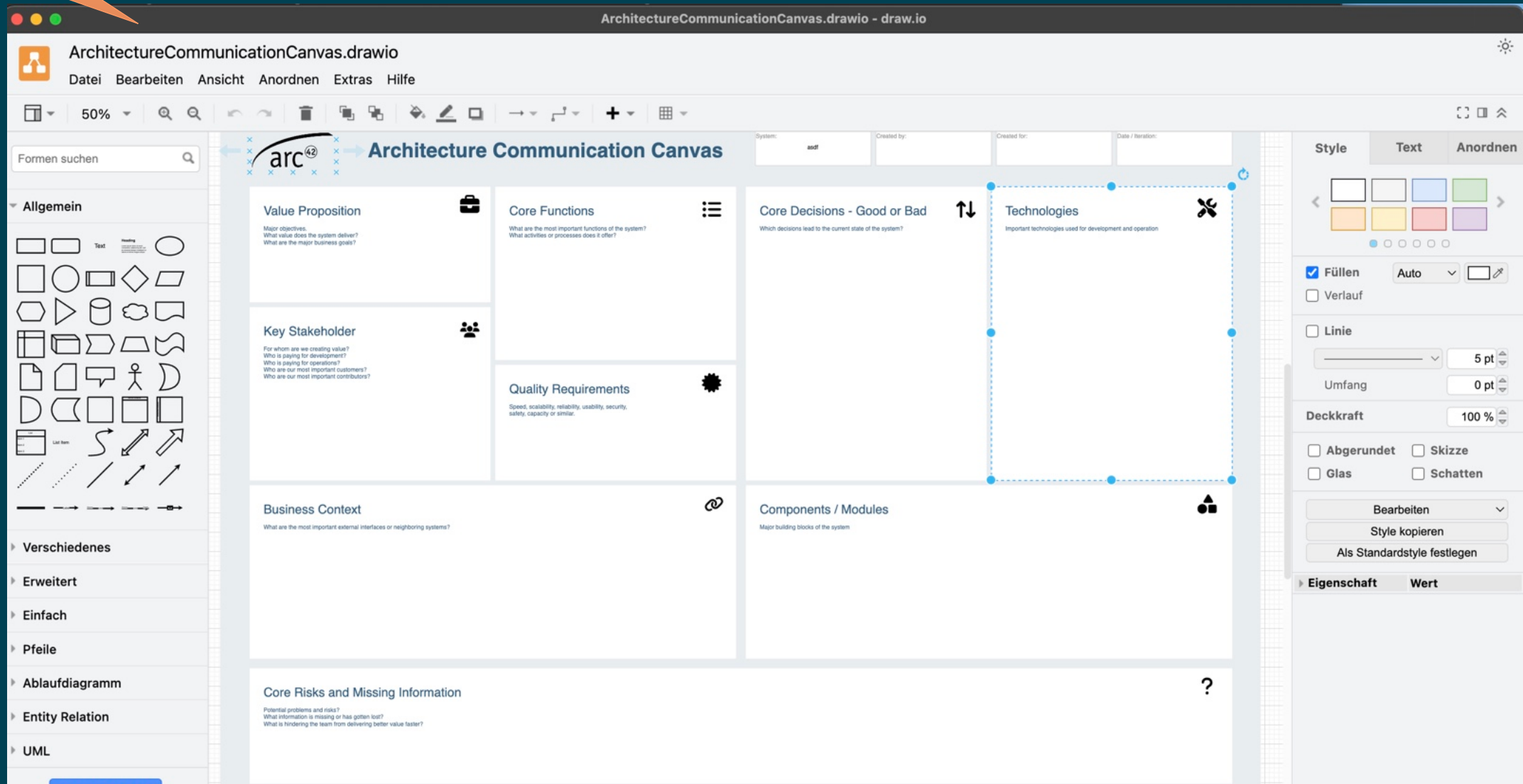
People



Photo by [mauro mora](#) on [Unsplash](#)

draw.io,
diagrams.net

Tooling (1)



pptx

Tooling (2)

Automatisches Speichern • AUS ... ArchitectureCommunicationCanvas-v2 — Auf "meinem Mac" gespeichert

Start Einfügen Zeichnen Entwurf Übergänge Animationen Bildschirmpräsentation Aufzeichnen >> Sie wünschen Aufzeichnen Kommentare Freigeben

Einfügen Neue Folie F K U $\frac{1}{x}$ $\frac{1}{y}$ AV Aa In SmartArt konvertieren Bild Anordnen Schnellformatvorlagen Designer

1 Architecture Communication Canvas

2 Architecture Communication Canvas

arc⁴² Architecture Communication Canvas

System	created by	created for	date / iteration
Value Proposition			
Key Stakeholder		Core Functions	Technologies
Business Context			
Risks and Missing Information		Core Decisions - Good or Bad	Components / Modules

Quality Requirements

Miro

Tooling (3)

The screenshot displays the Miro web interface with the 'Architecture Communication Canvas' template loaded. The browser address bar shows the URL https://miro.com/app/board/uXjVM9NP_Ts/. The Miro toolbar at the top includes navigation, editing, and sharing tools. The canvas itself is a structured grid for architectural documentation.

Architecture Communication Canvas

System: Created by: Created for: Date / Iteration:

Value Propositions Major objectives. What value does the system deliver? What are the major business goals?	Core Functions What are the most important functions of the system? What activities or processes does it offer?	Core Decisions - Good or Bad Which decisions lead to the current state of the system?	Technologies Important technologies used for development and operation
Key Stakeholder For whom are we creating value? Who is paying for development? Who is paying for operations? Who are our most important customers? Who are our most important contributors?	Quality Requirements Speed, scalability, reliability, usability, security, safety, capacity or similar.	Components / Modules Major building blocks of the system.	
Business Context What are the most important external interfaces or neighboring systems?			
Risk and Missing Information Potential problems and risks? What information is missing or has gotten lost? What is hindering the team from delivering better value faster?			

More arc42 resources:

- Website: arc42.org
- GitHub: github.com/arc42
- arc42 Documentation: docs.arc42.org
- arc42 Quality Model: quality.arc42.org
- Architecture Inception Canvas: canvas.arc42.org/archi
- Architecture Communication Canvas: canvas.arc42.org/communication-canvas more formats available for download
- arc42 YouTube Channel: youtube.com/arc42-video

Tooling XL

Miro,
very nice

Architecture Communication Canvas

System:

Created by:

Created for:

Date / Iteration:



Core Functions



Core Decisions - Good or
Bad



Technologies



Quality Requirements



Business Context

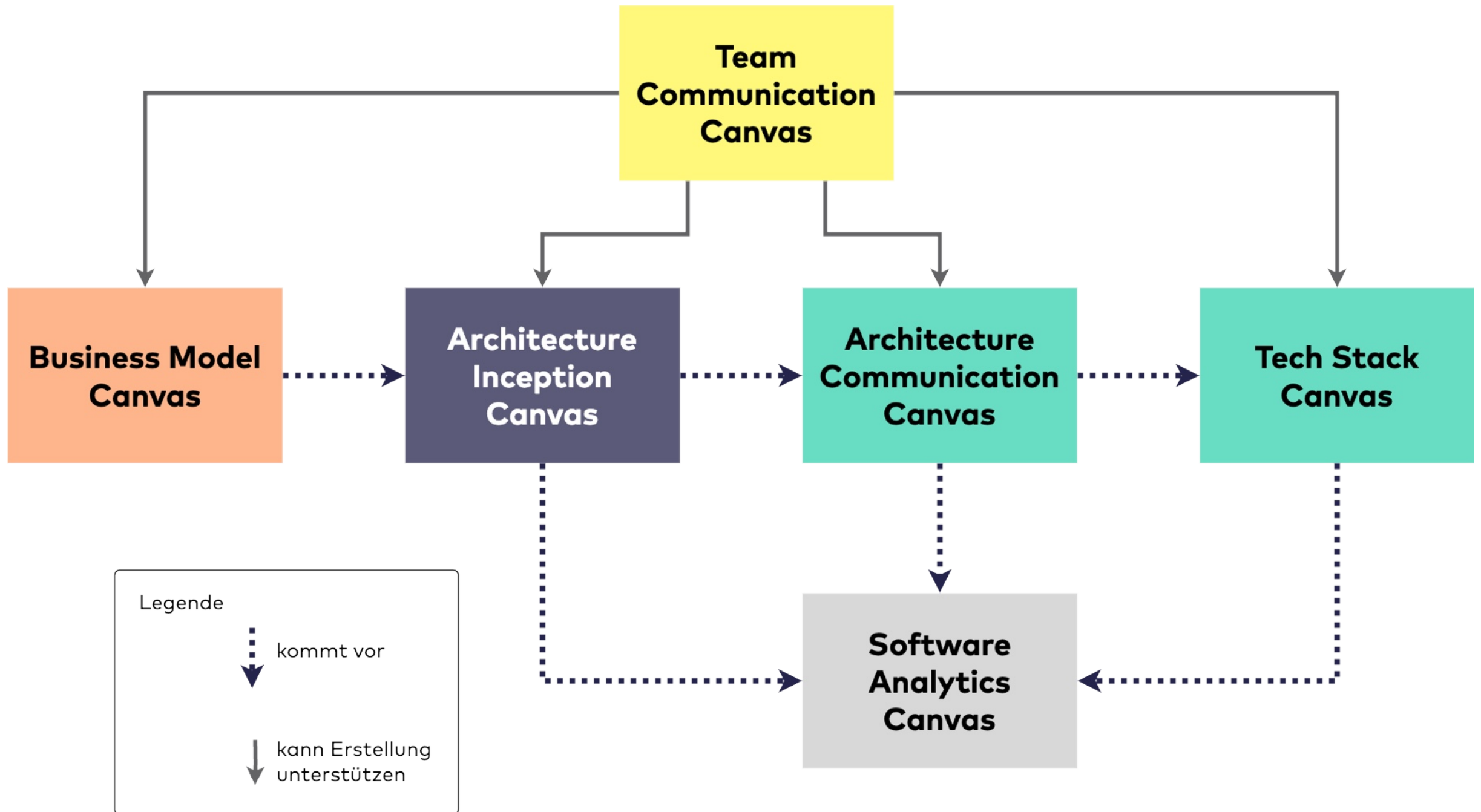


Components / Modules



Risk and Missing Information





INOQ

Canvas 101

One-Pager für bessere
Kommunikation

Markus Harrer • Anja Kammer • Lena Kraaz • Jörg Müller
Patrick Roos • Gernot Starke • Benjamin Wolf

SIEBEN

- verschiedene Canvas-Ansätze
- von sieben Expert:innen erklärt





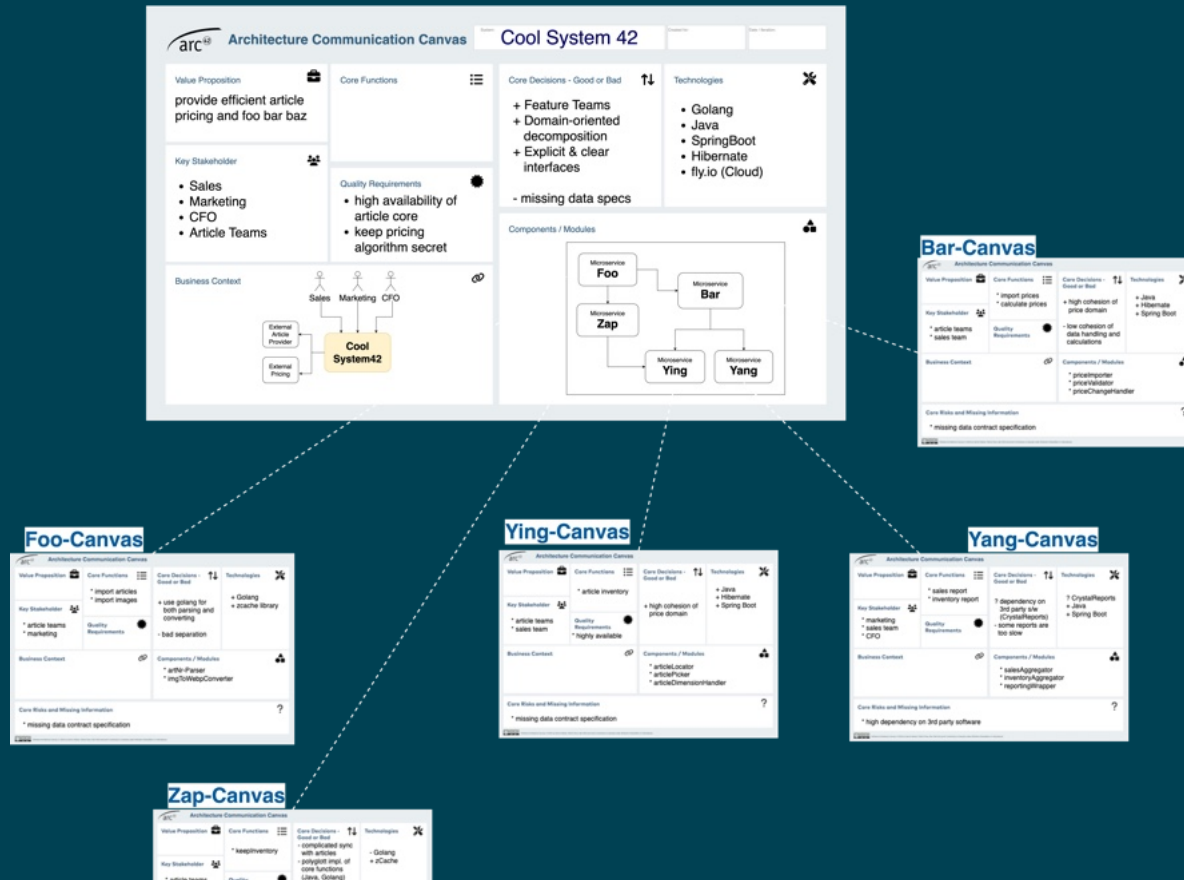
Benjamin Wolf

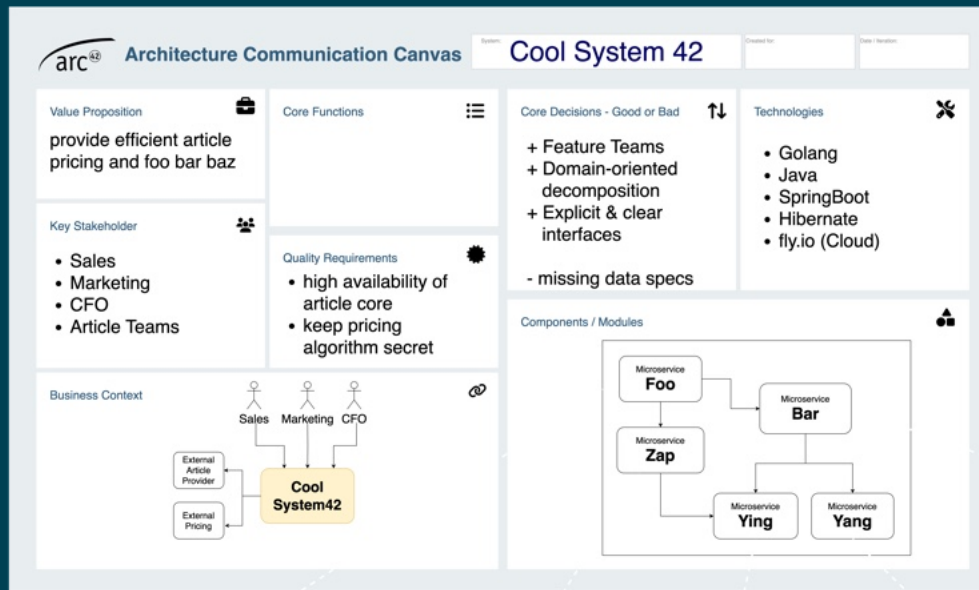
benjamin.wolf@innoq.com

LinkedIn: [benjaminwolf1985](#)

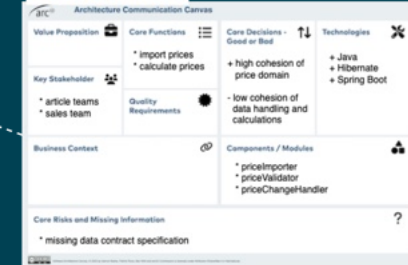
Mastodon: [@ben@innoq.social](#)

Documenting microservices becomes a breeze.





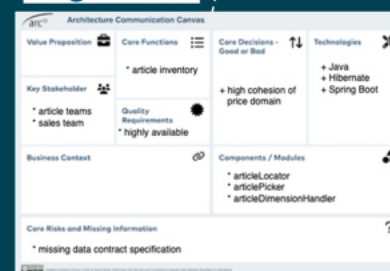
Bar-Canvas



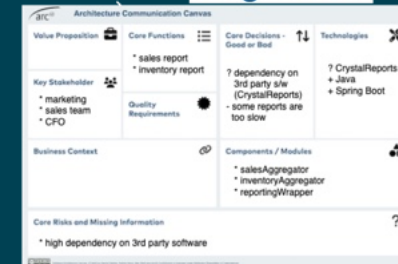
Foo-Canvas



Ying-Canvas



Yang-Canvas



Zap-Canvas

