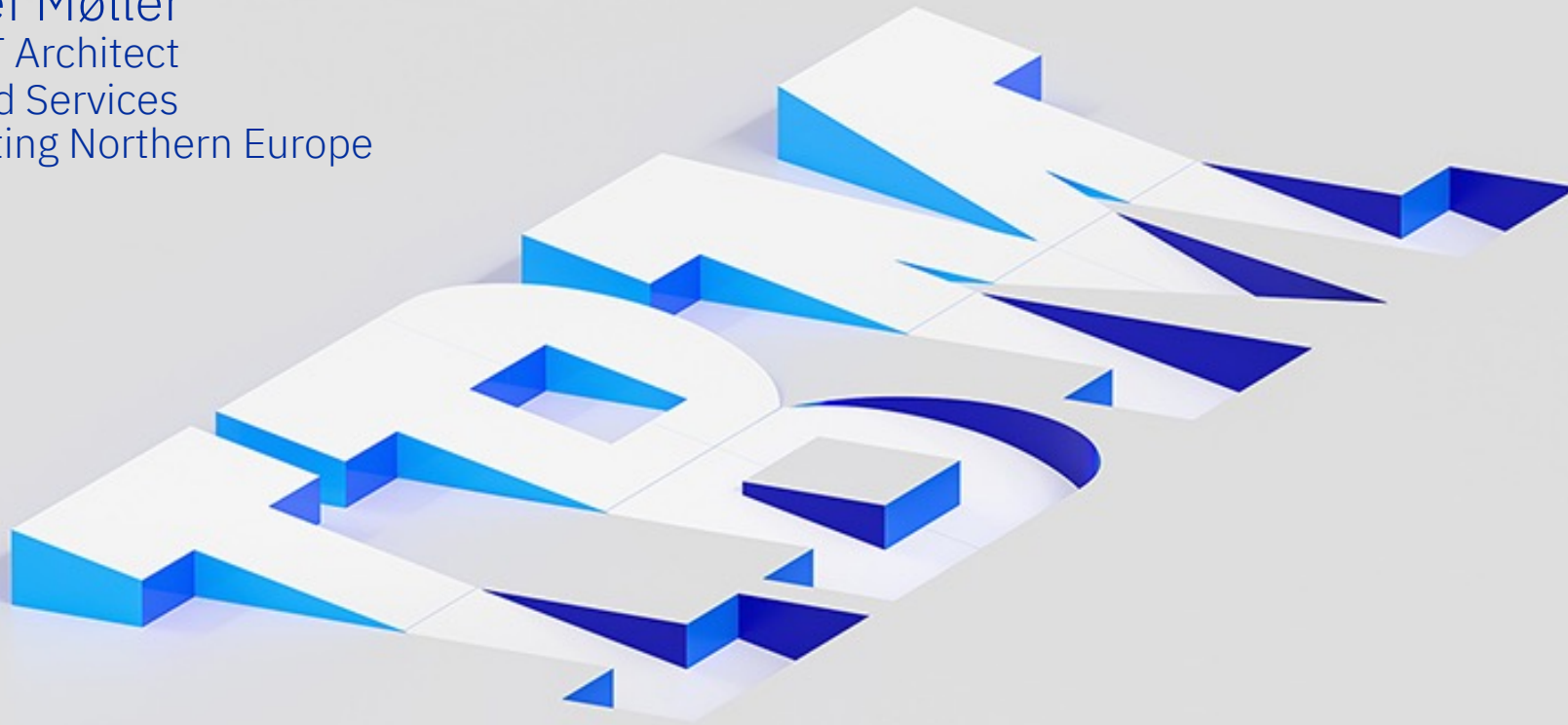


# Modernizing the Monolith

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Jens helps clients modernize existing complex applications using cloud native technologies and platforms.

For the last couple of years, he has worked with several Danish clients on building mission-critical solutions with OpenShift and other Red Hat technologies.

Jens has a background in mathematics and computer science and has more than 30 years of experience in the IT industry



In this session you will learn about a mission-critical Danish integration platform which will be modernized using Red Hat OpenShift.



# IBM Consulting for Red Hat

Services to provide E2E Application Transformation for clients seeking to exploit the business value potential of Red Hat  
Ability for clients to manage risks, optimize outcomes and improve speed



**Top 5** Partner

*Leader in Hybrid Cloud Services & Open-Source Innovation*

**30+** Hybrid Cloud Journeys

We use proven technical journeys to give our clients a prescriptive path to migrate to OpenShift

We follow **5** principles in our approach to cloud

**Hybrid** public and private enterprises environment  
**Multicloud** Management working in a heterogenous environment  
**Open** by design, enabling client flexibility and agility  
**Security** and reliability for the entire environment  
**Managing** consistent service level supporting and delivery

**2,000+** Red Hat certifications

**6900+** Red Hat accreditations

**36,000+** trained and certified across the major cloud platforms

We accelerate the Journey to Cloud for clients

**Advise** on every step of the journey to cloud  
**Move** and modernize workloads and applications  
**Build** innovative applications and experiences  
**Manage**, govern and optimize Hybrid Multicloud environments

# The client

## KOMBIT

*KOMBIT brings together local authorities in order to create high-quality, low-cost, common IT solutions.*

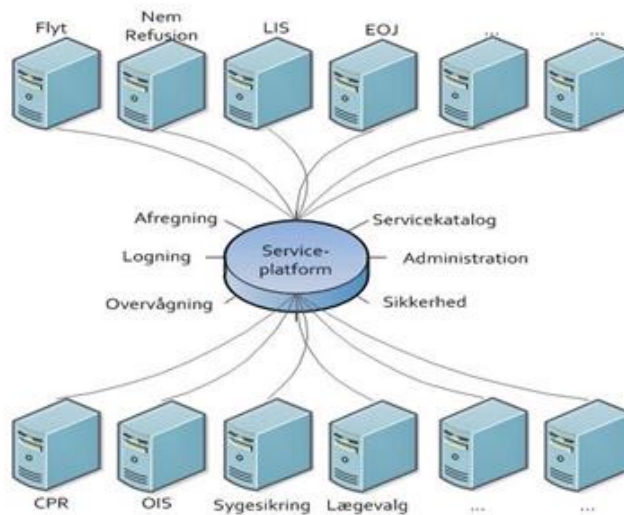
The screenshot shows the KOMBIT website interface. At the top, there's a navigation bar with the KOMBIT logo and a search icon. Below the navigation bar, there are four buttons: "Løsninger", "Videncenter", "Aktuelt", and "Karriere". To the right of these buttons, there are links for "Kontakt" and "Tilmeld nyheder". The main heading is "Løsninger". Below this, there's a filter bar with four tabs: "Alle", "Løsninger under udvikling", "Løsninger i drift", and "Øvrige projekter". The main content area displays a grid of 12 solution cards. Each card has a title, a brief description, and a green triangle in the bottom right corner. The card titled "KDI - Kommunernes Data & Infrastruktur" is highlighted with a red border. The cards are arranged in a 3x4 grid.

Alle	Løsninger under udvikling	Løsninger i drift	Øvrige projekter
<b>Aula</b>	<b>BBR - Bygnings- og Boligregistret</b> BBR indeholder oplysninger om alle bygninger og boliger i Danmark.	<b>Bibliotekernes Data og It</b> Læs om KOMBITs arbejde med Bibliotekernes Data og It	<b>Borgerblikket</b> Borgerblikket er en it-løsning, der samler data og viser dem på en...
<b>Byg og Miljø</b> Byg og Miljø sikrer, at både borgere, virksomheder og kommuner kommer let...	<b>DUBU (Digitalisering - Udsatte Børn og Unge)</b> DUBU fremmer sammenhæng og kvalitet på området Udsatte børn og unge. Løsningen...	<b>ESR-projektet</b> Ejendomsstamregistret skal fortsat understøtte kommunale processer i...	<b>FLIS - Fælleskommunalt Ledelsesinformationssystem</b> FLIS er infrastruktur og et strategisk styringsredskab, der anvendes på...
<b>Fælles Faglige Begreber</b> Fælles Faglige Begreber er et digitaliserings- og dokumentationsprojekt på det...	<b>Fælleskommunal Virksomhedskontakt Database</b> Understøttelse til virksomhedskontakt på tværs af kommuner og kommunale...	<b>KDI - Kommunernes Data &amp; Infrastruktur</b> KDI sikrer bedre og billigere data til kommunerne via den fælleskommunale...	<b>Kommunernes Sygedagpengesystem (KSD)</b> Løsningen automatiserer sagsbehandling og udbetaling af sygedagpenge.
<b>Kommunernes Vdelsessystem (KY)</b>	<b>Køreprøvebooking</b>	<b>Mit Sygefravær</b>	<b>NemRefusion</b>



# The solution

Kommunens it-løsninger  
(anvendelsystemer):



Kildesystemer:

The Service platform is a core piece of the municipality IT infrastructure in Denmark.

It delivers data and functionality from source systems such as the Danish Tax Authorities, the CPR and CVR registries, NemKonto etc.

Most Danish municipalities and a number of IT vendors are connected to the platform.

The Service platform was launched in 2013.

In 2019/2020 the solution was transitioned to IBM following a public tender.

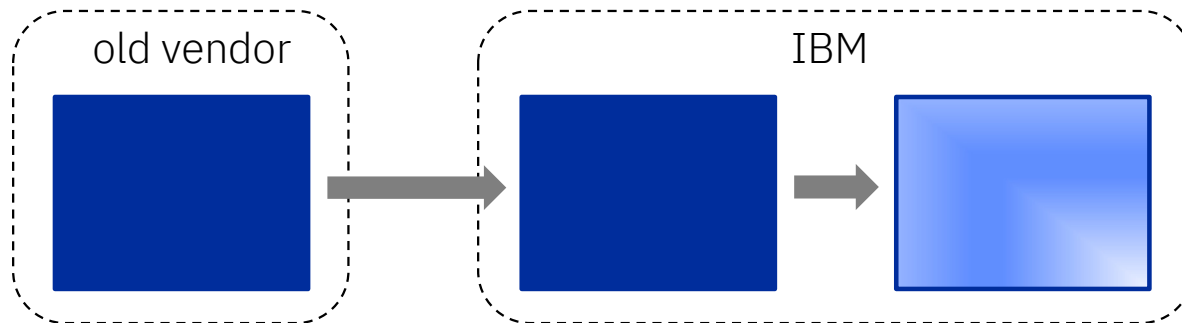
# How IBM is helping Kombit

## Transition and Transformation engagement

- lift existing solution from on-prem to cloud
- run, maintain and extend existing solution...
- ...while gradually modernizing it

## Modernization Goals

- Flexibility and speed
- Multi-vendor delivery
- Automation and self-service
- Portability and limitation of vendor dependencies



# Continuous Modernization

Strangler pattern

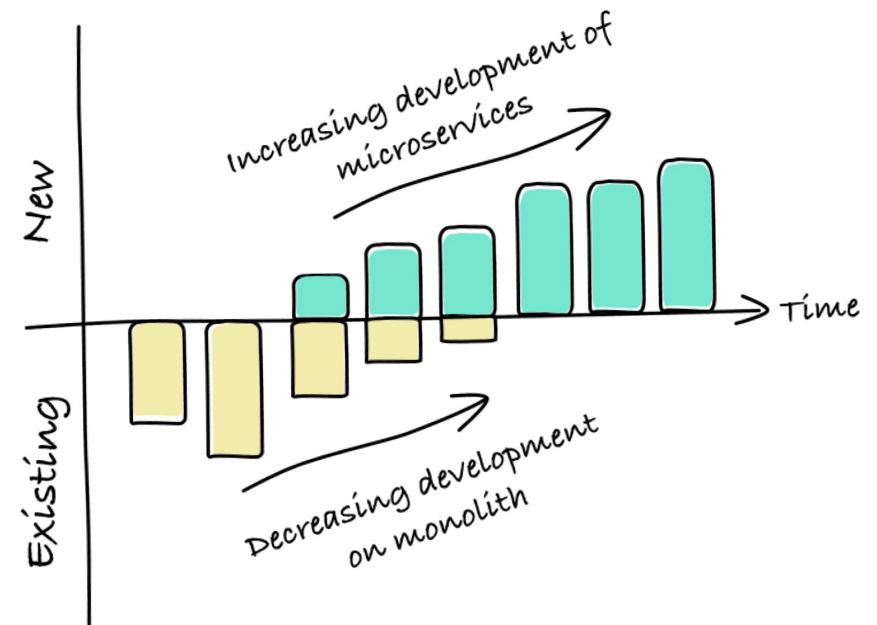
Agile delivery method

Value-driven

Reduces risk of failure

Allows shorter feedback cycles

Ensures modernization is value-driven and can be interlocked with other development initiatives





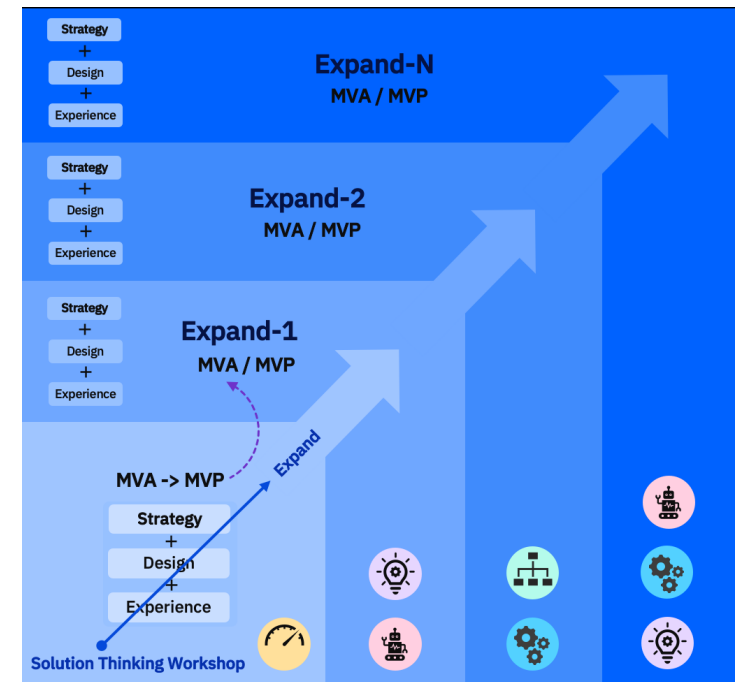
# Guiding Principles

No Big Design Up Front

Incremental Value Realization

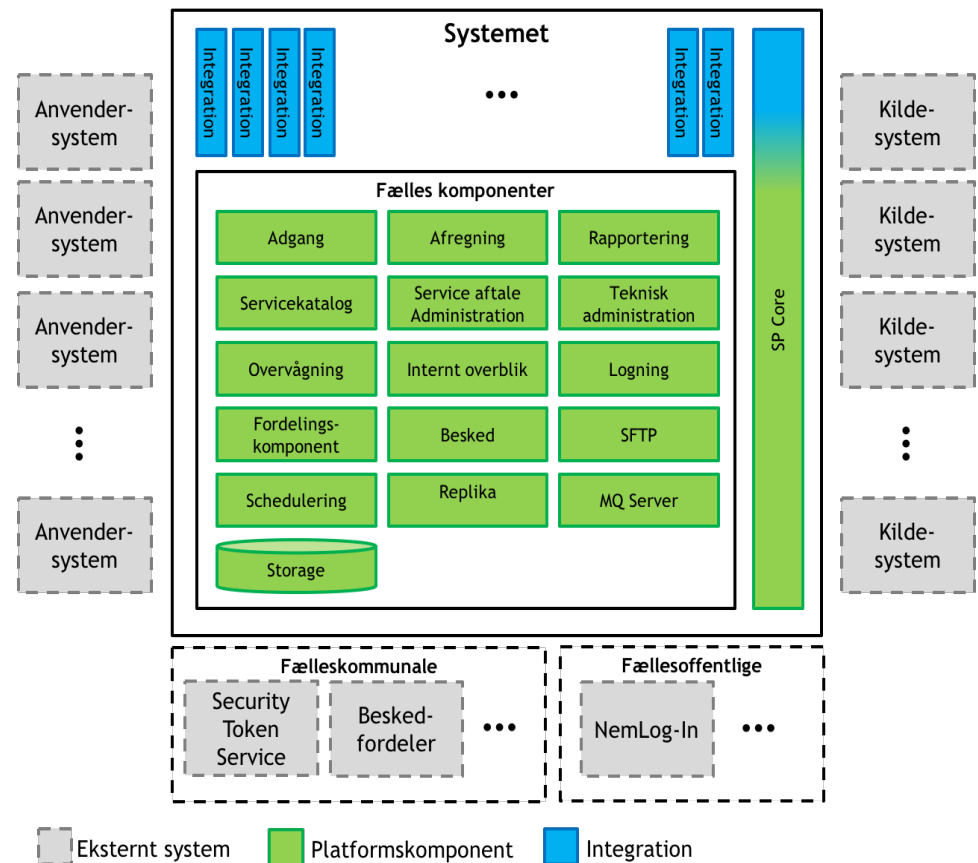
Minimum Viable Architecture (MVA)

Technical & Cultural Coexistence

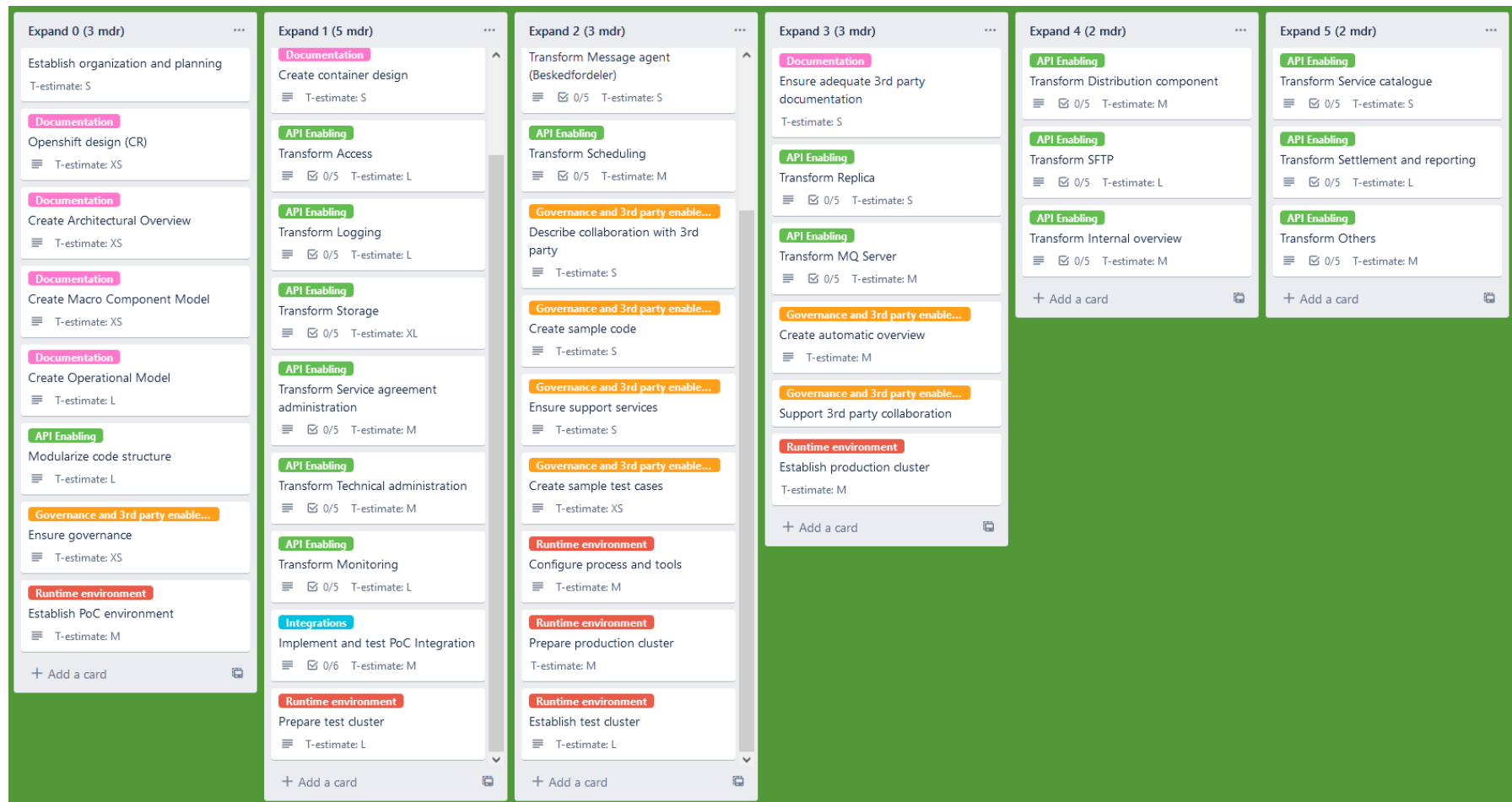


# Modernization based on components

- some will be rewritten
- some will be replaced
- some will be added



# Overall Modernization plan



# Solution Transformation goals

## Past

- private cloud (self-managed)
- virtual servers (pets)
- monolith in JBoss EAP
- single lifecycle for whole solution
- custom frameworks and tools
- labor-intensive processes
- service through OPS team
- traditional infrastructure

## Future

- OpenShift in Virtual Private Cloud
- containers (cattle)
- microservices in Quarkus
- independent lifecycle per microservice
- ServiceMesh, GitOps, Prometheus, ...
- integrated DevOps pipelines
- self-service
- software-defined/infrastructure as code

