



Architecture modernization legacy systems

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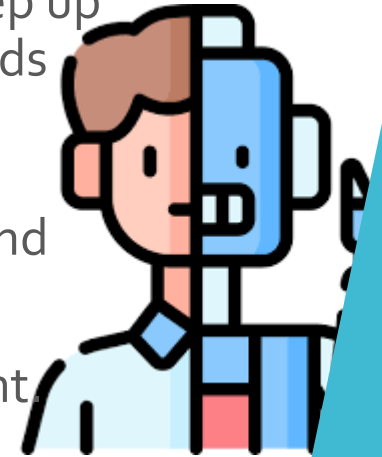
Presentation Overview

1. Initial approach to modernization
2. The importance of data engineering on architecture
3. Balance with business priorities
4. Risks and mitigation

What is architecture modernization



- Continuous evolution of a system's structure to keep up with evolving business tech and organizational needs
- - Long term strategy.
- - Driven by emerging technologies, market shifts and internal constraints.
- - Requires adaptive thinking and regular assessment.



Why it's ongoing



- Challenges with static architecture:
 - - Cant support rapid innovation.
 - - Accumulates technical debt.
 - - May limit scalability or Agility.



Why ongoing modernization matters in business



- - Enables business Agility and competitive advantage.
- - Supports team productivity.
- - Increments customer experiences.
- - Responds to external pressures as regulation business models and tech disruption.



The importance of data engineering on architecture

Relationship between data and architecture

- > You can't make anything without data
- > You can have all the architecture, good design or modernization you want that if you don't have data you can't go very far.
- > Enterprise systems usually have at least one data engineering team



The importance of data engineering on architecture

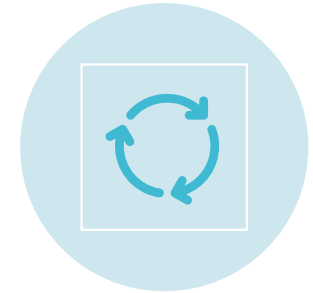
Evolution of data engineering



DATA HAS SIGNIFICANTLY
CHANGED BUT DATA ENGINEERING
PRACTICE NO



DATA ENGINEERING TEAMS DON'T
USE NEW APPROCHES OF PRACTICE
LIKE SCRUM OR USE SPRINTS



THEIR PRACTICES ARE NOT
WORKING, THEY ARE NOT
SCALABLE.

The importance of data engineering on architecture

Implementation data aspects

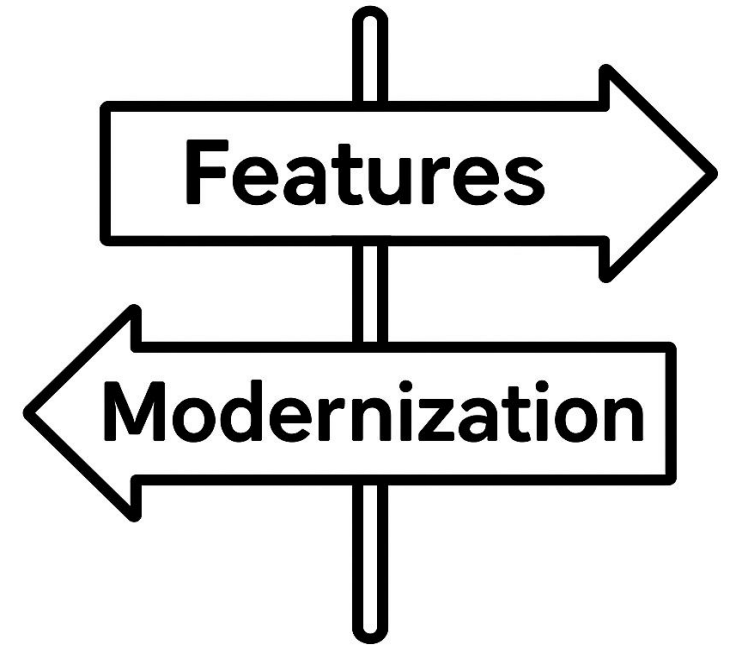
- > One criteria to modernize an architecture is data
- > The main driver is the change of philosophy versus on-prem to going to the cloud or new laws that come in effect.
- > Some ambits have a very strict regulations



Balance with
business
priorities

The Core Tension

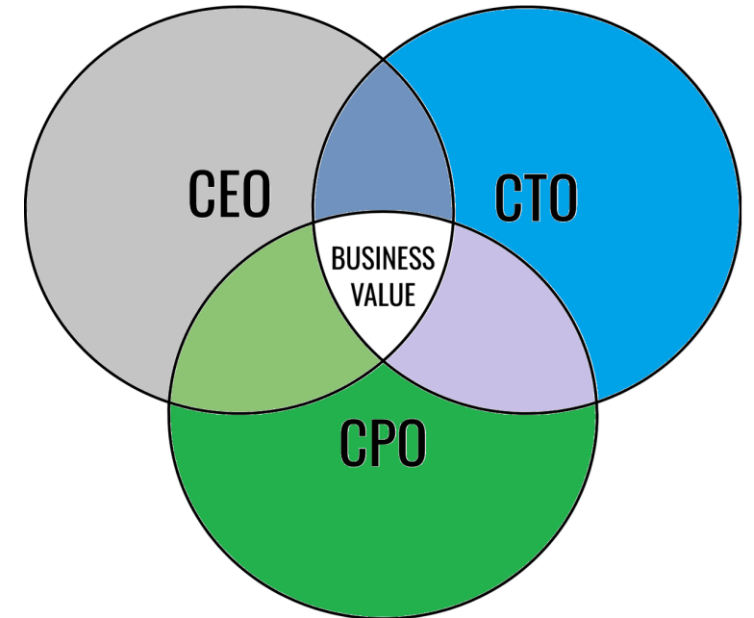
- > Modernization vs. New Features
- > Visible rewards favor feature development
- > Mixed signals from leadership confuse teams



Balance with
business
priorities

Aligning Priorities

- > Consistent C-level messaging (CEO, CTO, CPO)
- > Tie modernization to clear business value
- > Build multiple roadmap options



Balance with
business
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Data's Unique Challenge

- > Hard to quantify ROI (e.g., avoiding fines)
- > Tie modernization to clear business value
- > Incremental value builds credibility



Balance with
business
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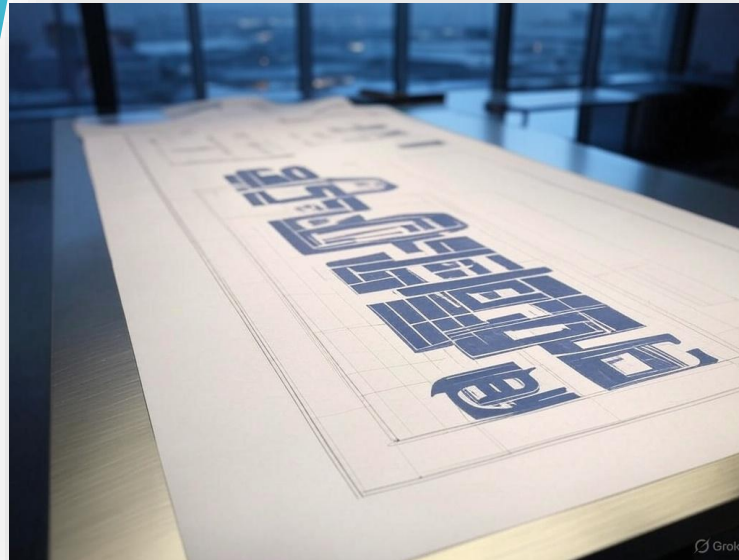
Key to Balance

-> Align leadership,
connect to goals, and
measure progress to
keep modernization on
track.

- ☒ Leadership
- ☒ Goals
- ☒ Progress

Why Modernization Fails: Common Errors

- Overly ambitious scope
- Technical debt carried into the new system
- Mismatched business and tech priorities
- “Stuck in the middle” — hybrid systems that don’t fully deliver value



Risks and mitigation

Hybrid Systems: A Risky Middle Ground

- Legacy systems still exist and require maintenance
- New systems don't integrate well
- Teams split across platforms, slowing down delivery
- **The outcome?** High complexity, low agility.



Quote – Jean-Georges Perrin: *"You can't deliver value if half the organization is still working with old assumptions."*

Risks and mitigation

For Reducing Risk:

- **Deliver incremental value:** keep stakeholders engaged
- **Define a clear modernization roadmap**
- **Align teams and architecture**
- **Invest in automation and testing**
- **Don't underestimate the social side** — teams, culture, and communication



Quote – Nick Tune: *"Plan for progress, not perfection. Focus on continuous delivery of value."*

Inevitable — But Manageable

Quote from the podcast:

"Modernization without risk doesn't exist — but neither does innovation without it."

