



GREAT TECHNICAL ARCHITECTS MUST BE GREAT ORGANISATION ARCHITECTS

*Nick Tune
@ntcoding*





Software architects are
being forced to adapt by
evolutionary pressures in
digital product development

1.

Customer Inspired

TOP SOURCES OF PRODUCT IDEAS

DIRECT CUSTOMER FEEDBACK

80 %

TEAM BRAINSTORMING

64 %

SALES TEAM

53 %

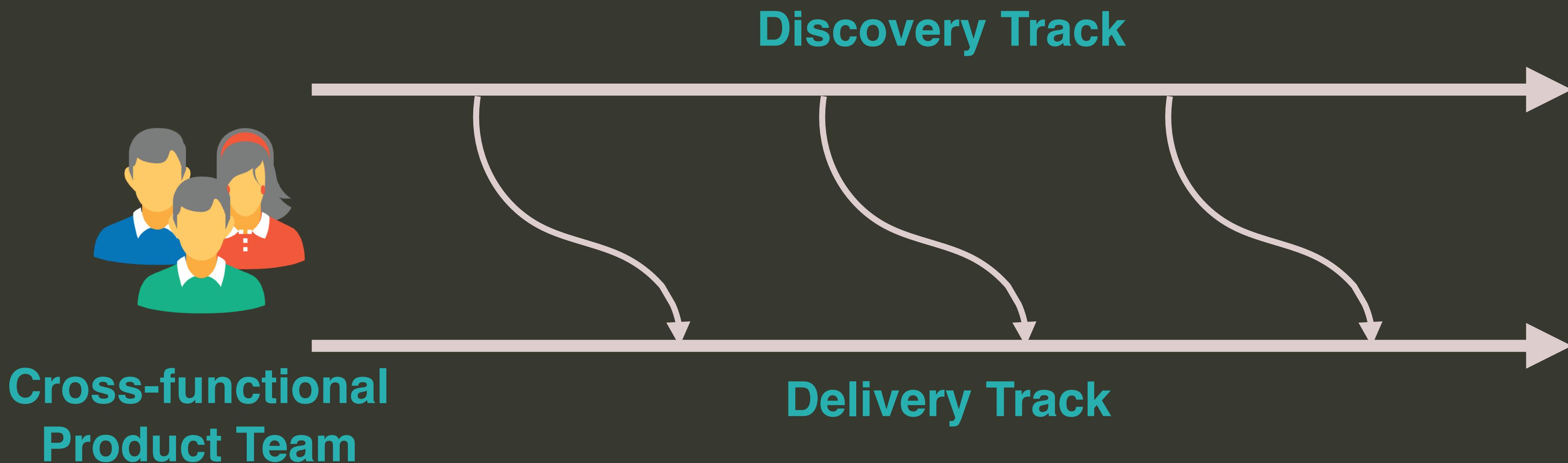
EXECUTIVE ORDER

51 %

* % respondents who agreed.

Source: Alpha UX Product Management Insights 2017

CONTINUOUS DISCOVERY & DELIVERY



2.

Infrastructure Commoditisation

“
Time spent on infrastructure tasks [by devs] is time taken away from feature work

— James Wen
SRE at Spotify

SPEED SERIOUSLY WINS

High performance organisations
deploy to production **46x** more
frequently than low performers

Source: Puppet 2017 State of DevOps Report

SPEED NOT ENOUGH

...but it was 200x in 2016 -
commoditisation of infrastructure
is creating a level playing field.

Value is moving up the chain.

3.

Connected Experiences



Seamless UX across many devices is a differentiator because the barrier to entry is at an unprecedented low

#1

THE ROLE OF THE ARCHITECT IN THE NEW WORLD?

Digital

Website

Website

Website

Enterprise IT



Data
APIs

Back
Office
Apps

“

The web server we will use on this project is probably older than you.

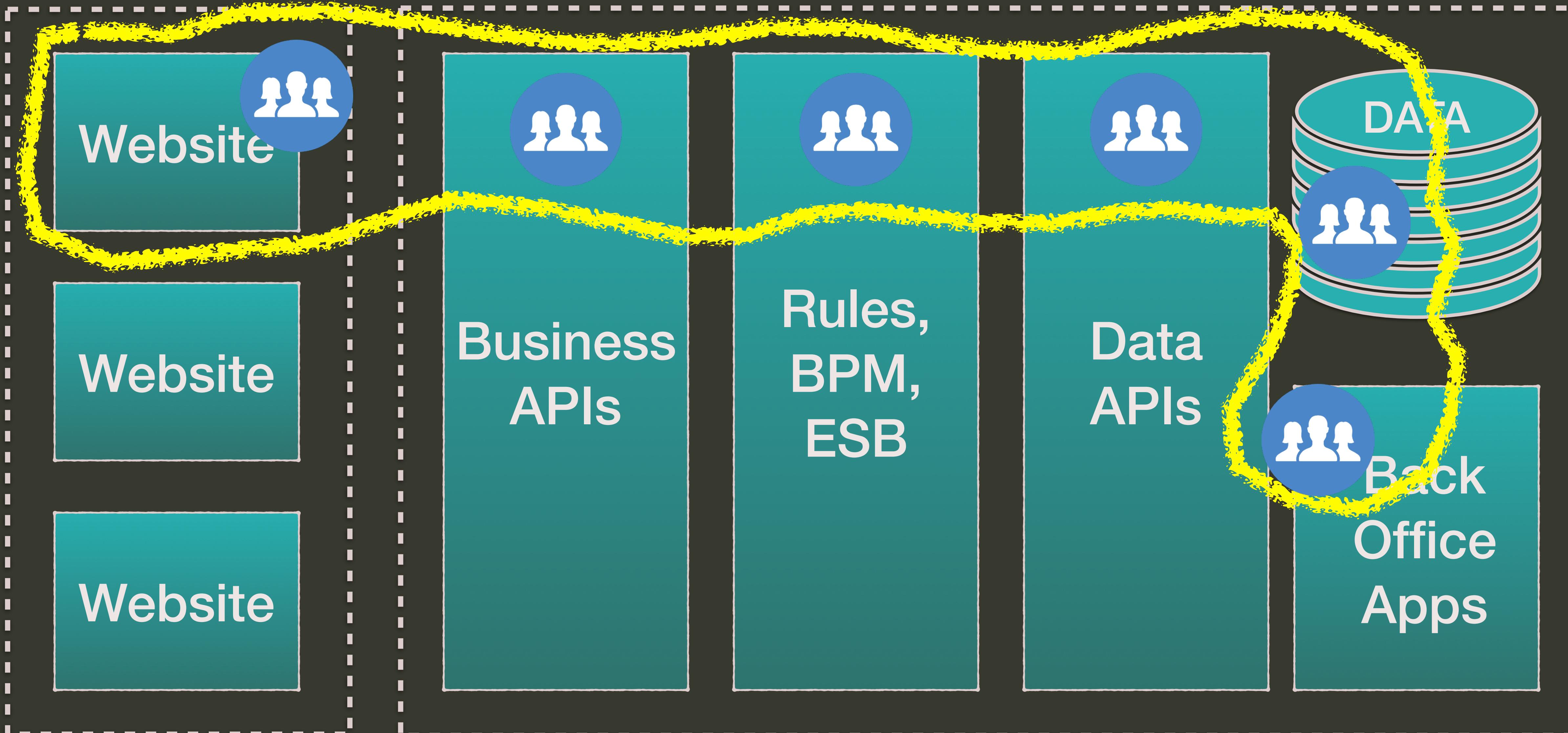
— Senior Architect

“Programmers are too slow. The industry is moving towards generic rules engines and BPM tools [that don’t need programmers].”

— Chief Architect

Digital

Enterprise IT



LESSONS LEARNED

- Dependencies make continuous discovery and delivery almost impossible
- Functional silos result in backend teams who are not incentivised to solve user problems
- Architects exacerbated the problems

This new era of digital
product development is a
tremendous opportunity to
rejuvenate the perception of
architects

“

*Most horror stories in
IT begin with the words
“The Architect”*

”



Dan Barua
@danbarua

“

[Architects] have outdated programming knowledge, tend to complex solutions, reduce quality of decisions, secure their job and ‘justify’ their high salary.

— Andriy Solovey
@AndriySolovey

“

The architect role often becomes a dictator. I think the problem is terminal now - even using the term architect is so tainted it needs to be given a different name.

– Mat McLoughlin
@mat_mcloughlin

”



Software Architect

Sociotechnical Architect

#2

SOCIOTECHNICAL ARCHITECTURE PATTERNS

BOUNDED CONTEXTS & DDD

Problem domains can be broken down into cohesive contexts that encapsulate things that change together for business reasons.

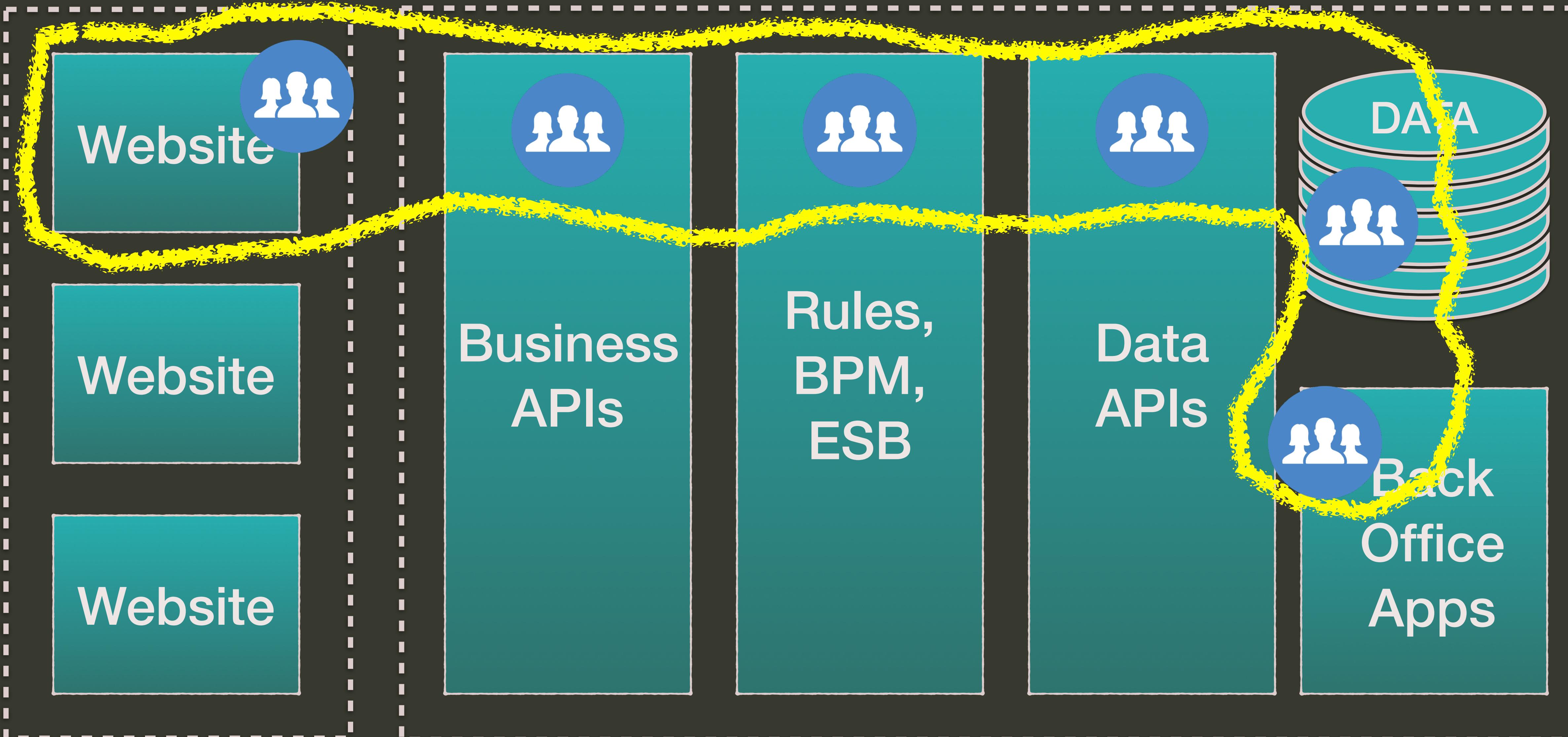
BOUNDED CONTEXTS & DDD

Align teams with bounded contexts, and teams will have the autonomy to continuously discover and deliver.

Digital



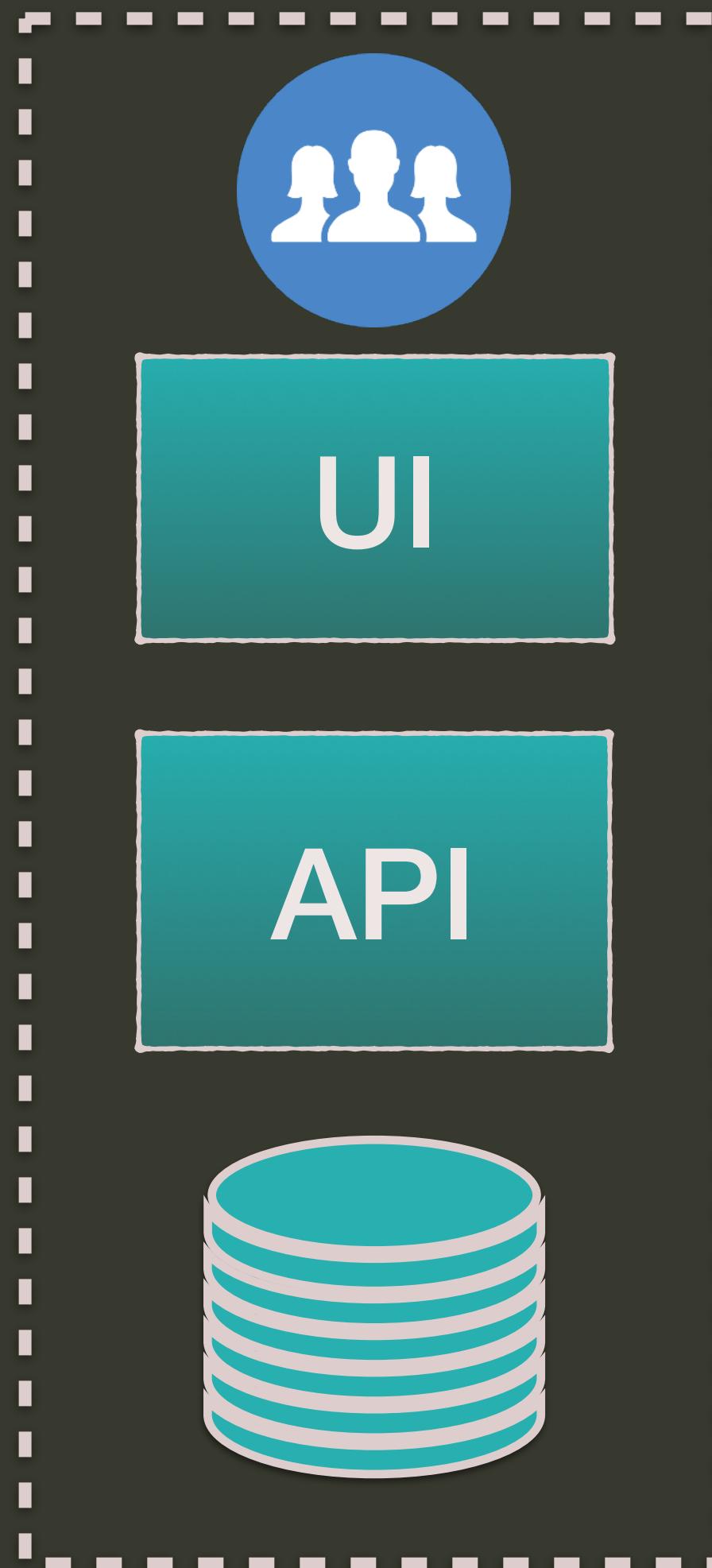
Enterprise IT



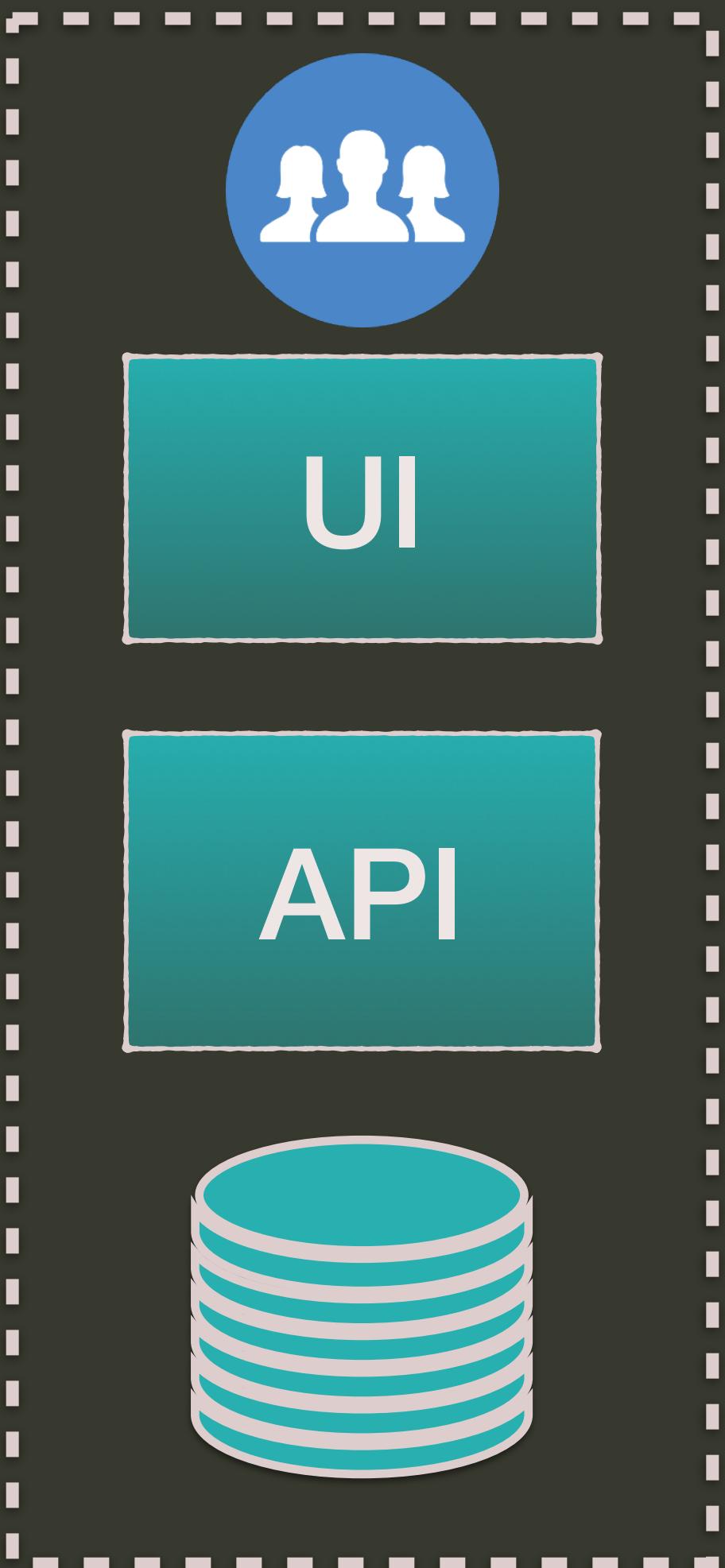
BOUNDED CONTEXT HEURISTICS

- Linguistic patterns
- Domain expert localisation
- Data cohesion

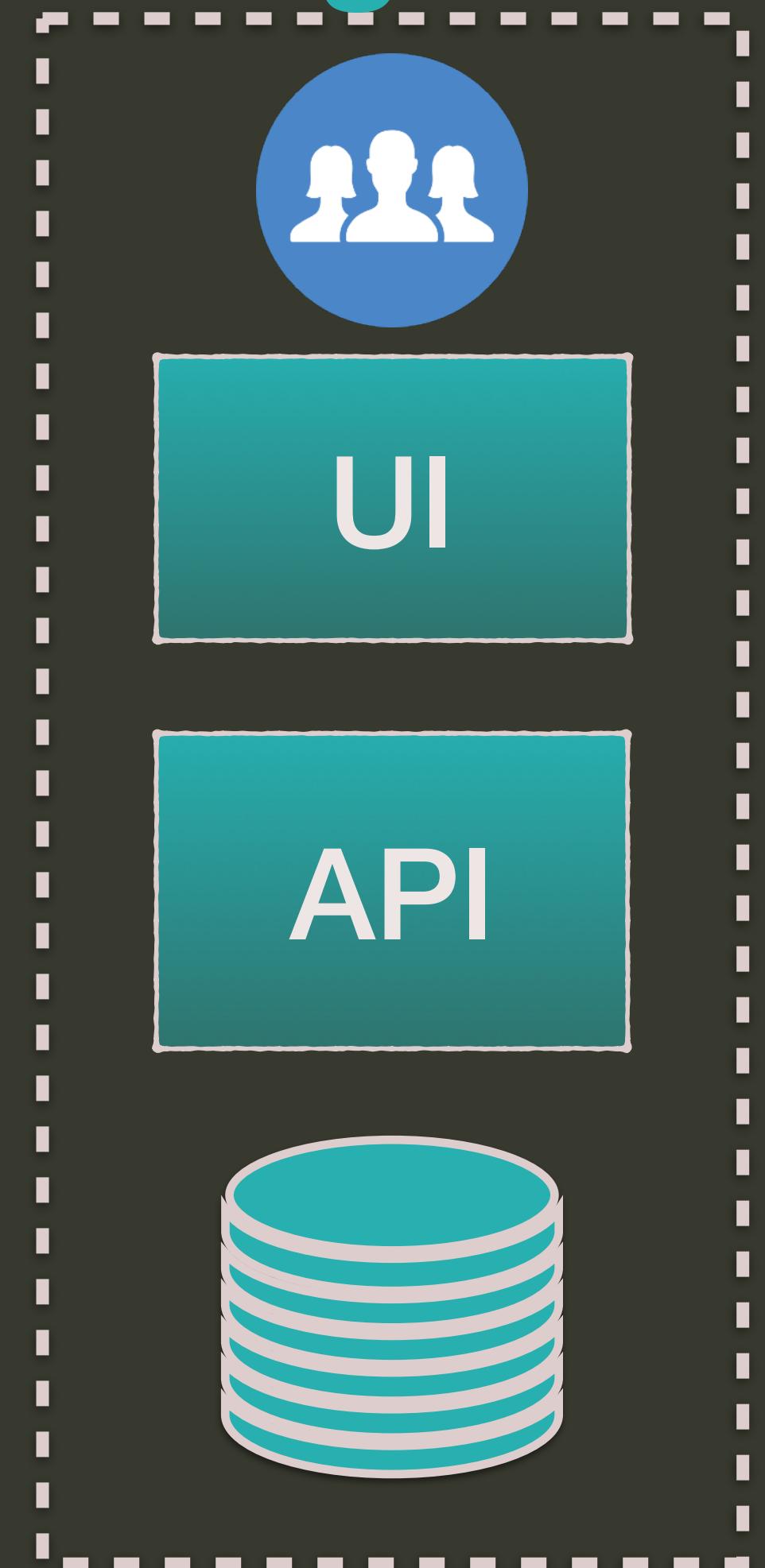
Review



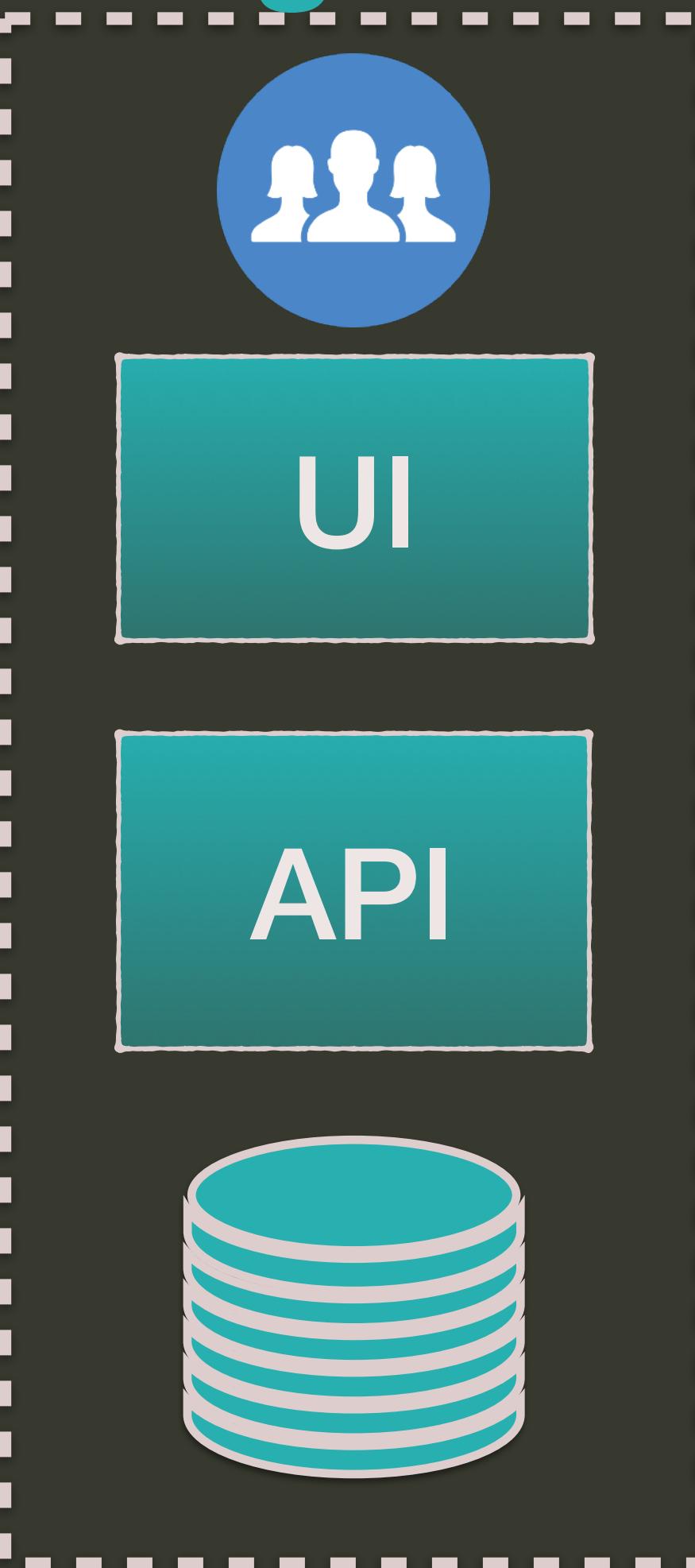
Resubmit



Renegotiate

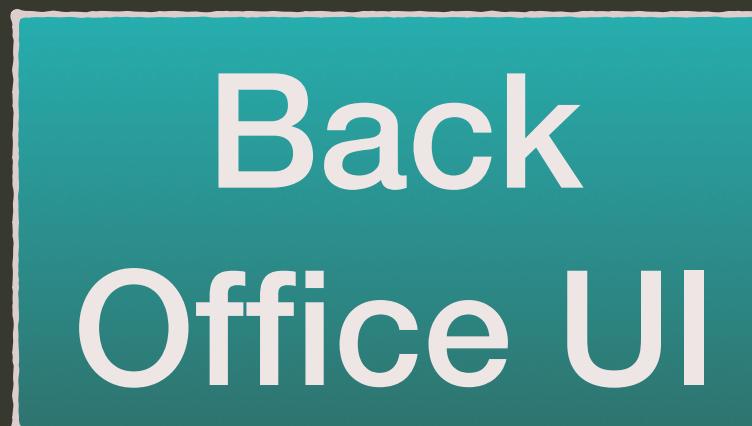
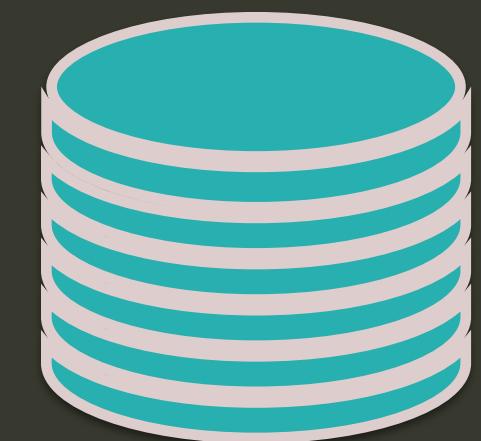


Case Management

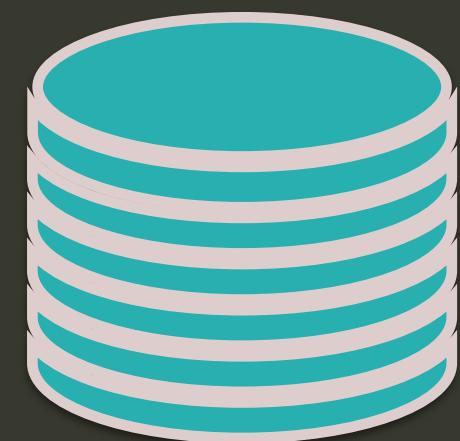
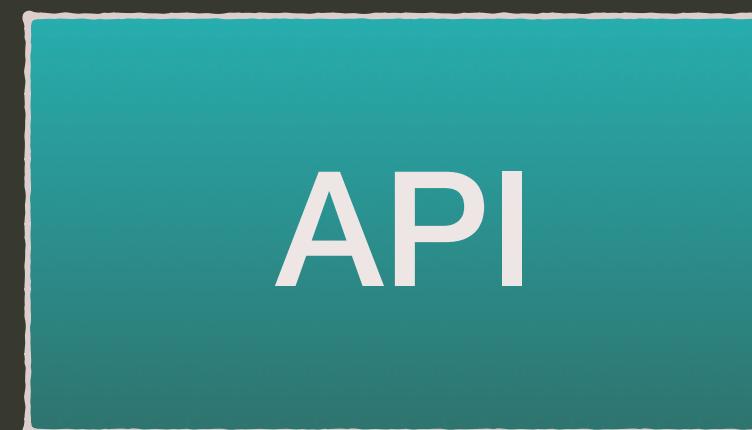




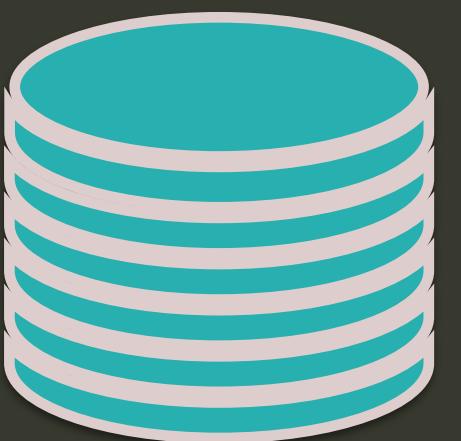
Review



Resubmit



Renegotiate





Bounded contexts are too
low level - you need to
understand bounded context
types and patterns

PATTERN: STABLE SEQUENTIAL PROCESS





Bounded context patterns
show which teams need to
be more closely aligned &
with common goals

PATTERN: PARTNERSHIP CONTEXT

Discovery



Search



Catalogue



Downloads

OTHER SOCIOTECHNICAL PATTERNS

- Octopus context
- Centralised expertise
- Bubble context
- Discovery context
- Lots more...





Architects can lead the
discovery and documentation
of sociotechnical architecture
patterns - especially at scale

#3

ARCHITECTING THE SYSTEM OF WORK

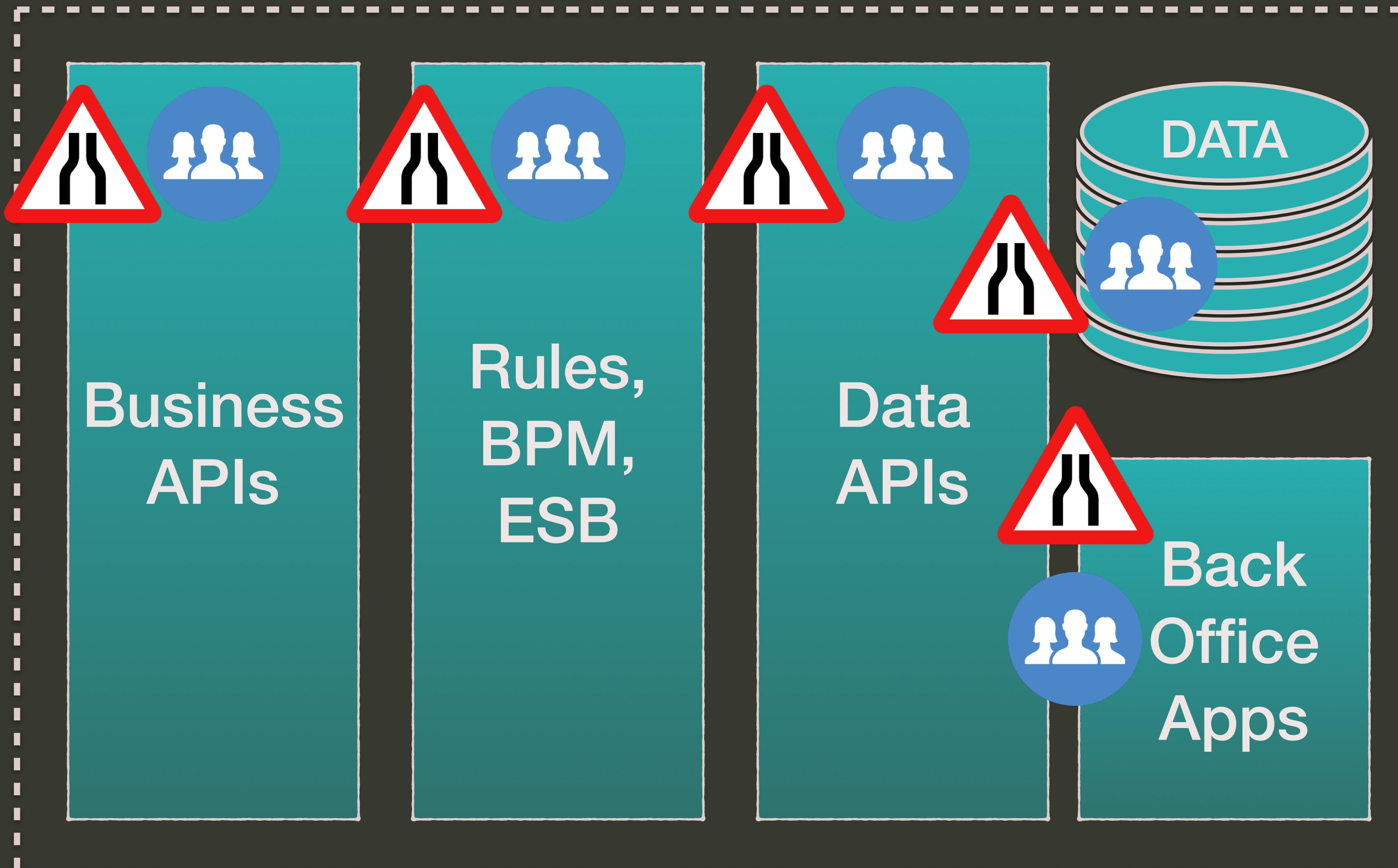


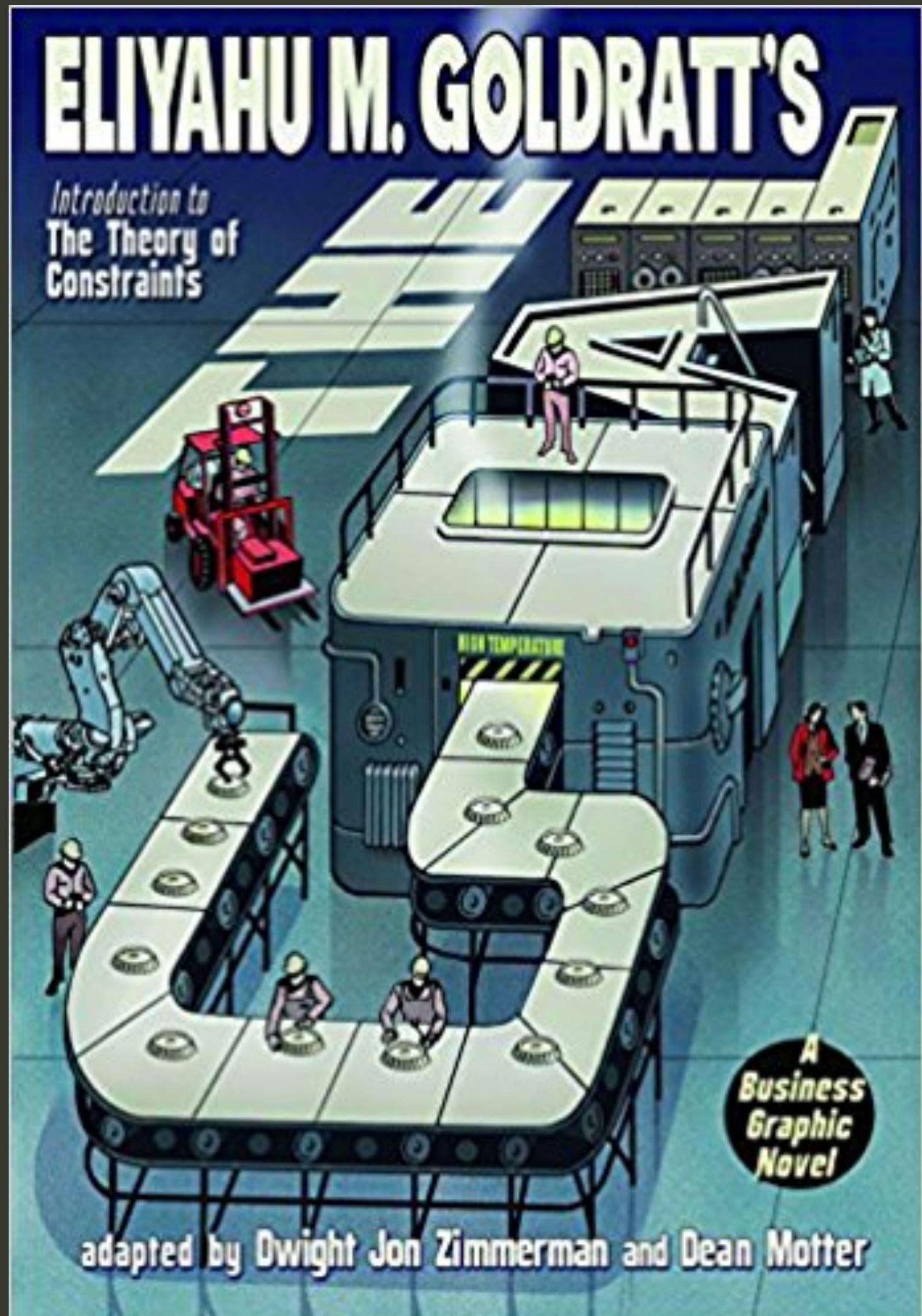
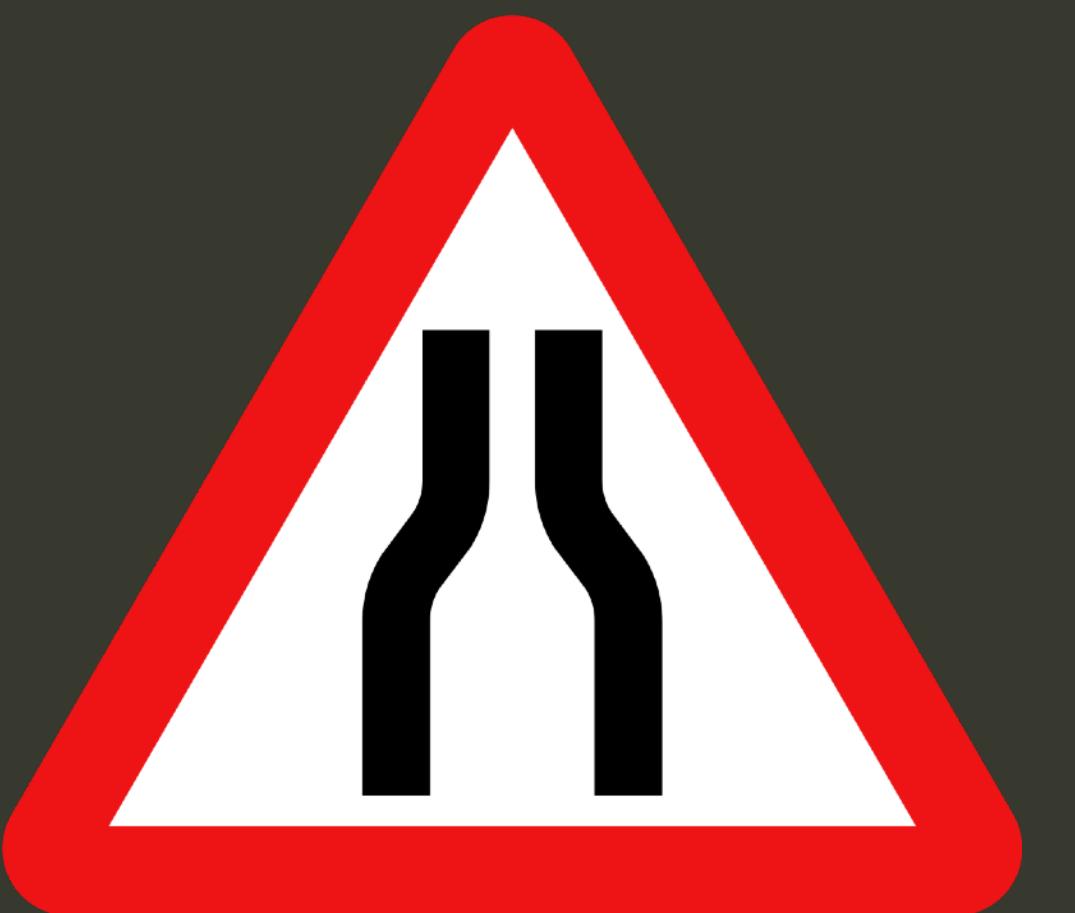
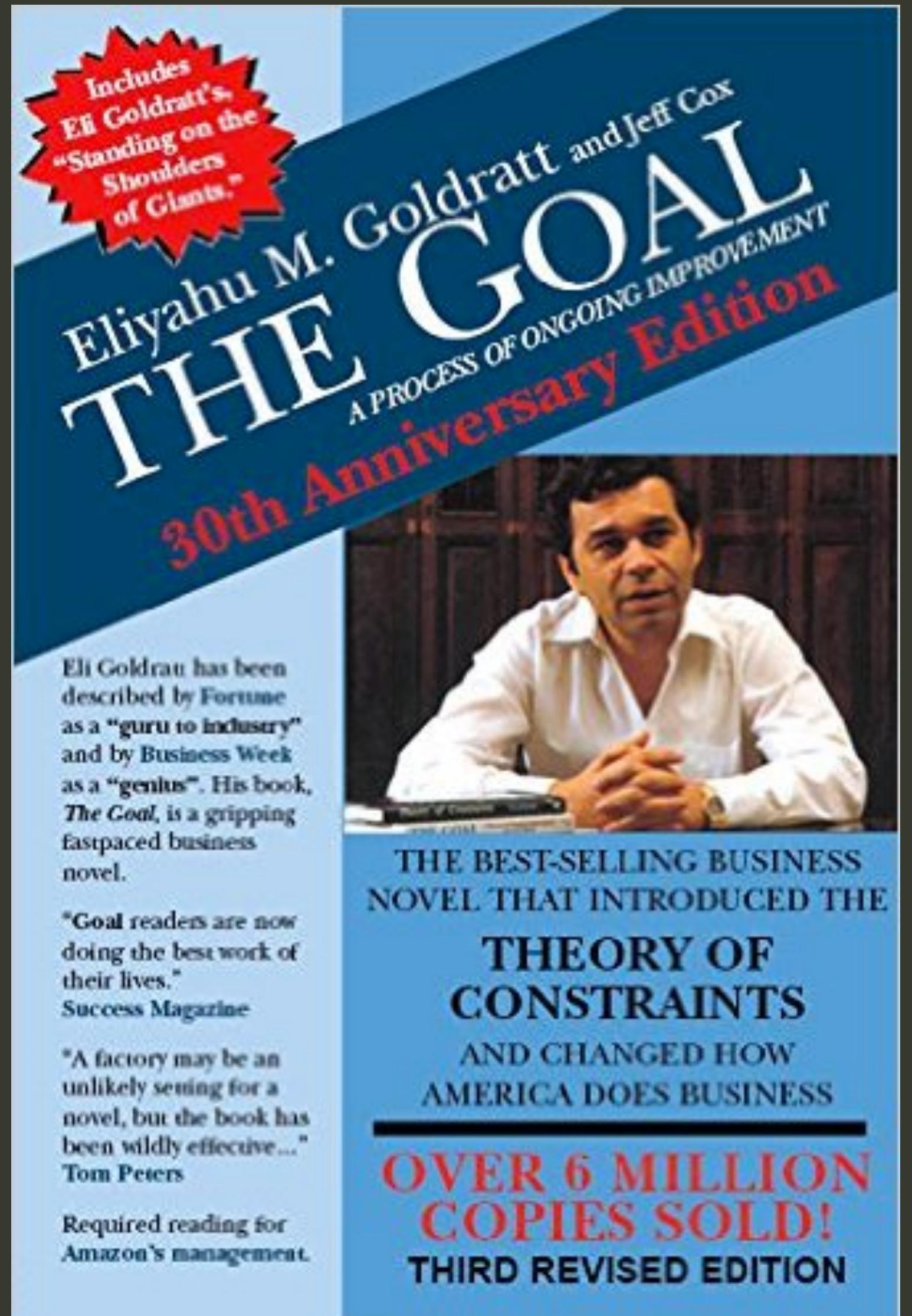
Architects design for
compile time and runtime -
flow (of work) is not even on
our radar

THEORY OF CONSTRAINTS

The performance of an organisation is limited by constraints. Remove the constraints to improve performance of the organisation.

Digital





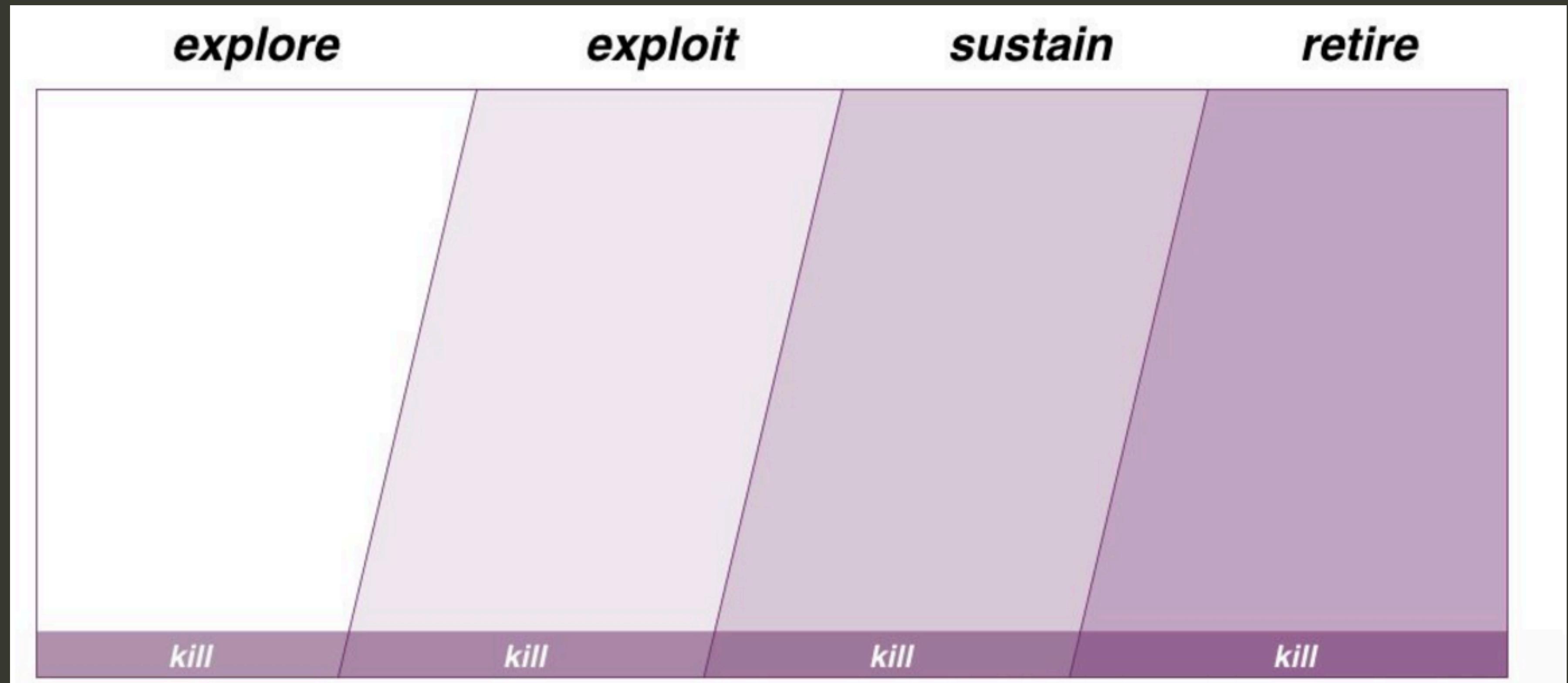
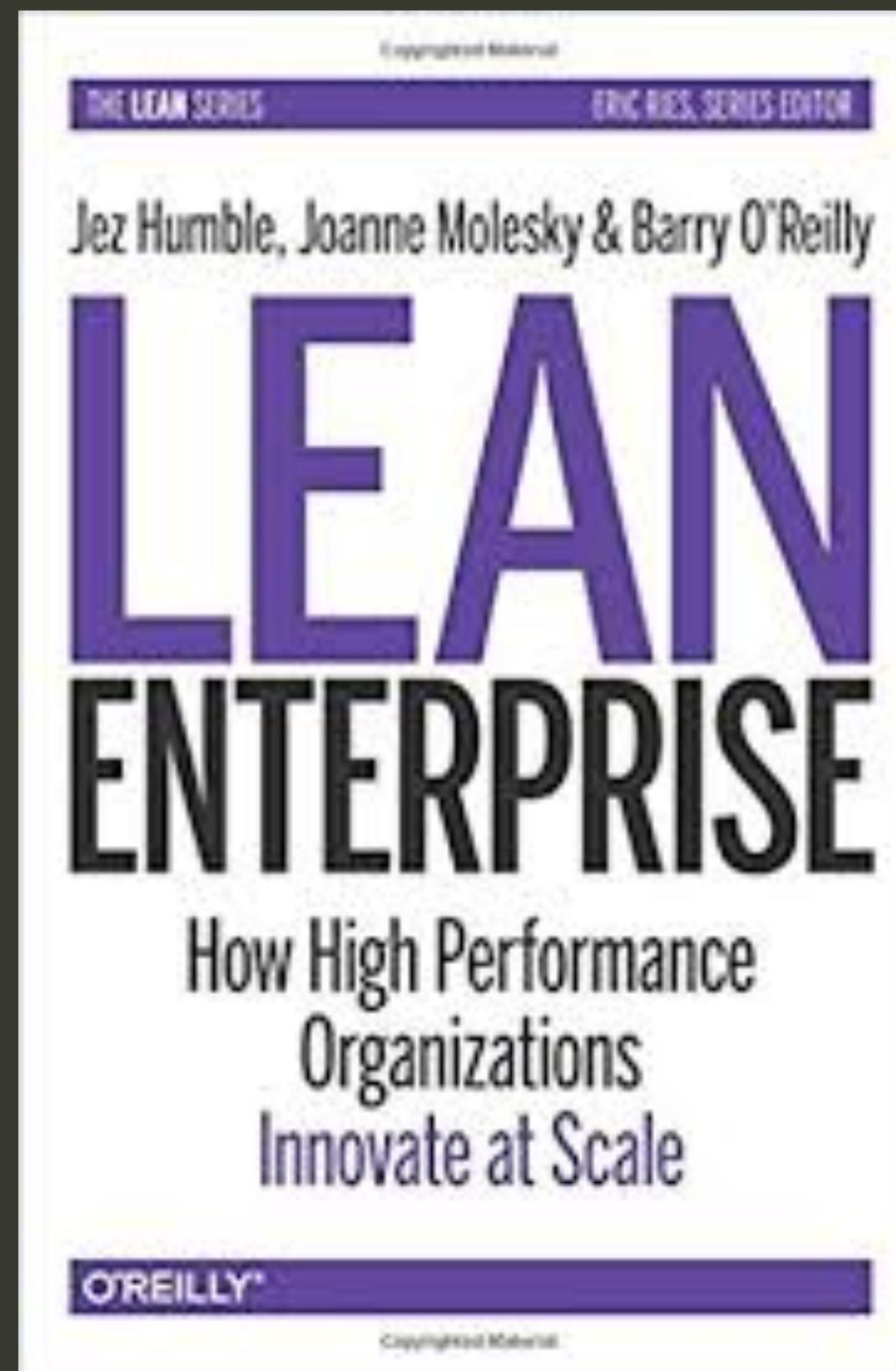


Find boundaries that
eliminate constraints (the
most costly bottlenecks)

SITUATIONAL AWARENESS

Use different sociotechnical architecture patterns at different stages of the product innovation lifecycle

INNOVATION PORTFOLIO

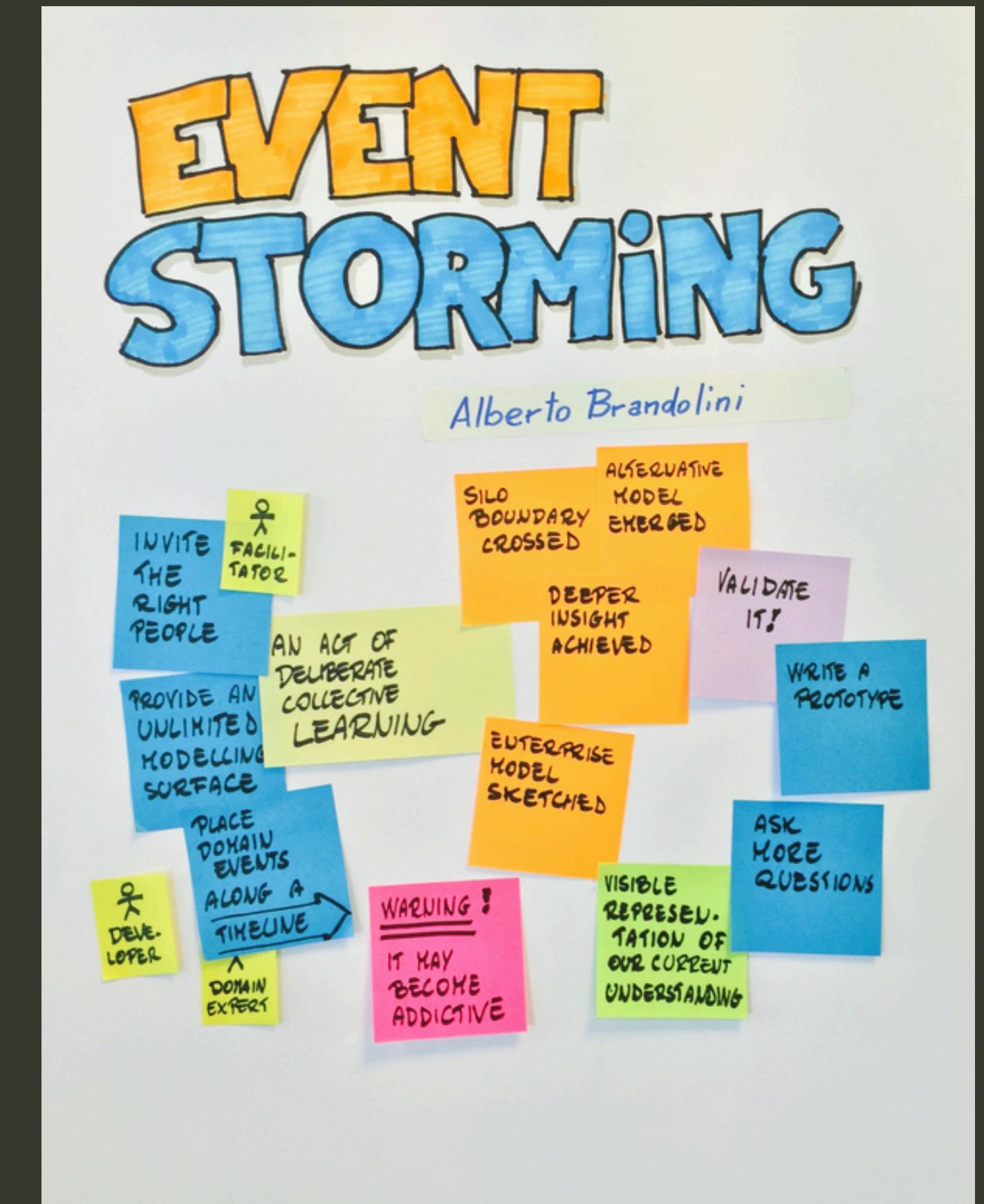


#5

THE SOCIOTECHNICAL ARCHITECT'S TOOLBOX

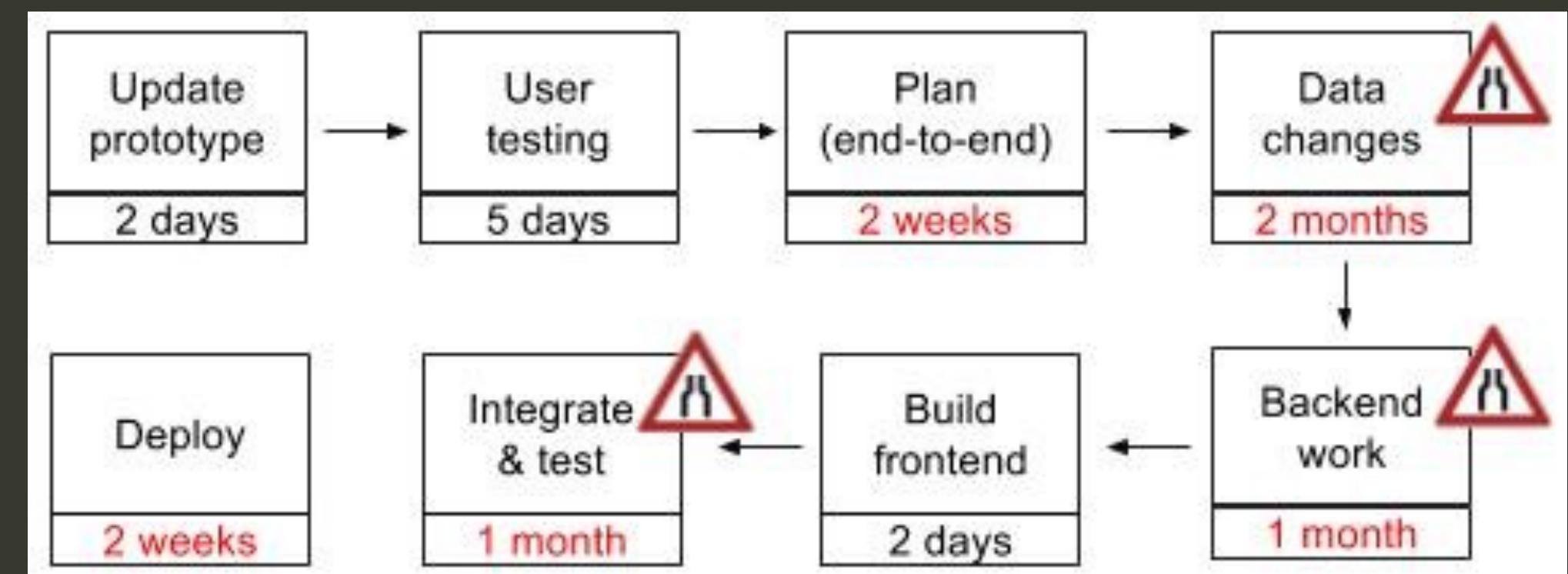
EVENT STORMING

- Discover bounded contexts
- Identify bounded context patterns
- Discover bottlenecks
- Coach teams & execs



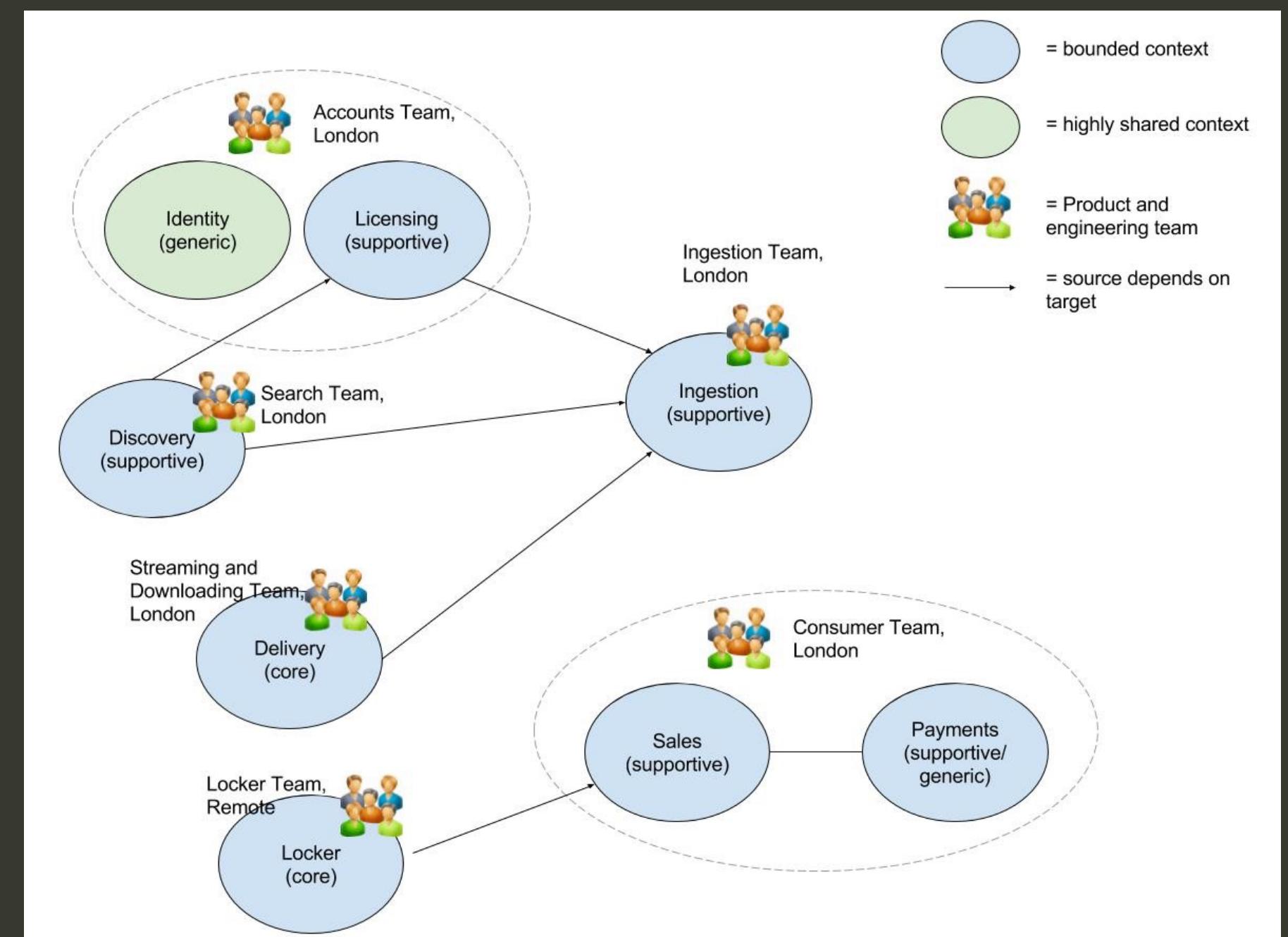
VALUE STREAM MAPPING

- Discover bottlenecks
- Quantify cost of bottlenecks
- Coach teams & execs



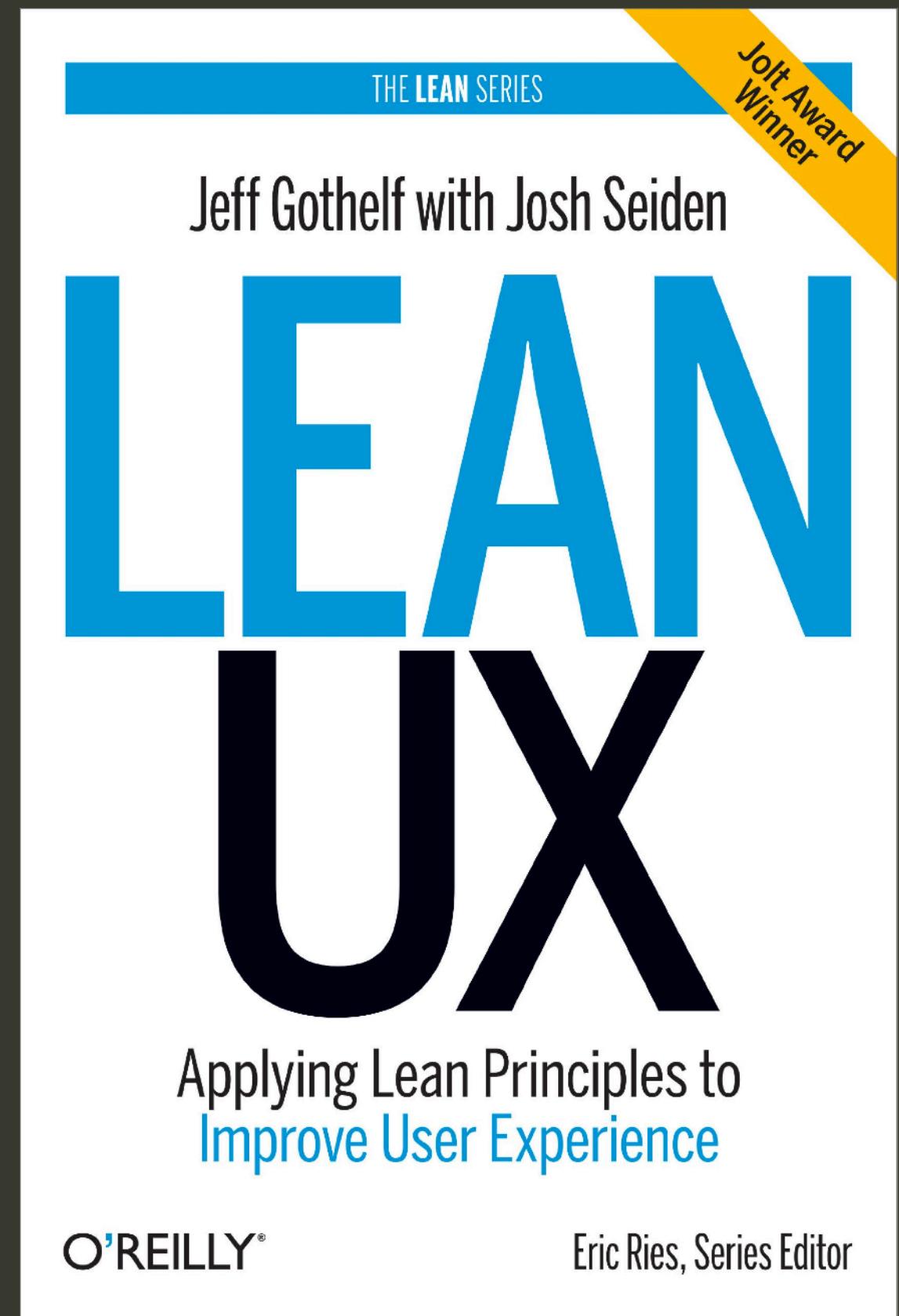
CONTEXT MAPPING

- Visualise sociotechnical architecture patterns
- Explore multiple models
- Coach teams & execs



LEAN UX

- Master continuous discovery
- Champion user needs
- Coach teams & execs



#5

BECOMING A SOCIOTECHNICAL ARCHITECT ...



Value is moving up the
chain. Architecting software
systems in isolation is
harmful. We must adapt.

HOW TO ADAPT

- Software architect -> sociotechnical architect
- Discover and share patterns
- Dictator -> advisor/facilitator/coach

O'REILLY®

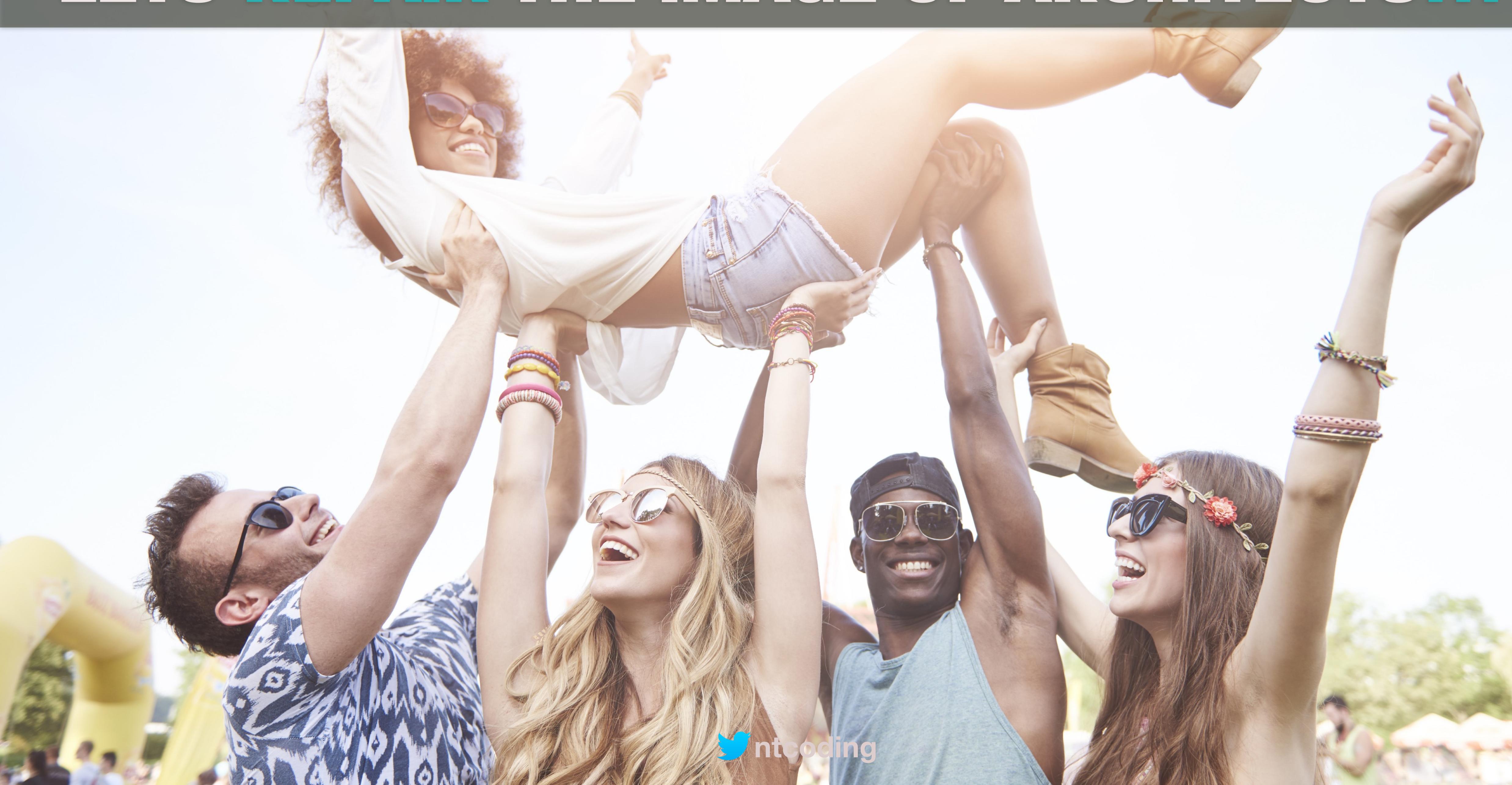
Designing
Autonomous Teams
and Services

Deliver Continuous Business Value
through Organizational Alignment



Nick Tune & Scott Millett

LETS REPAIR THE IMAGE OF ARCHITECTS...



MORE...

ntcoding.co.uk/workshops

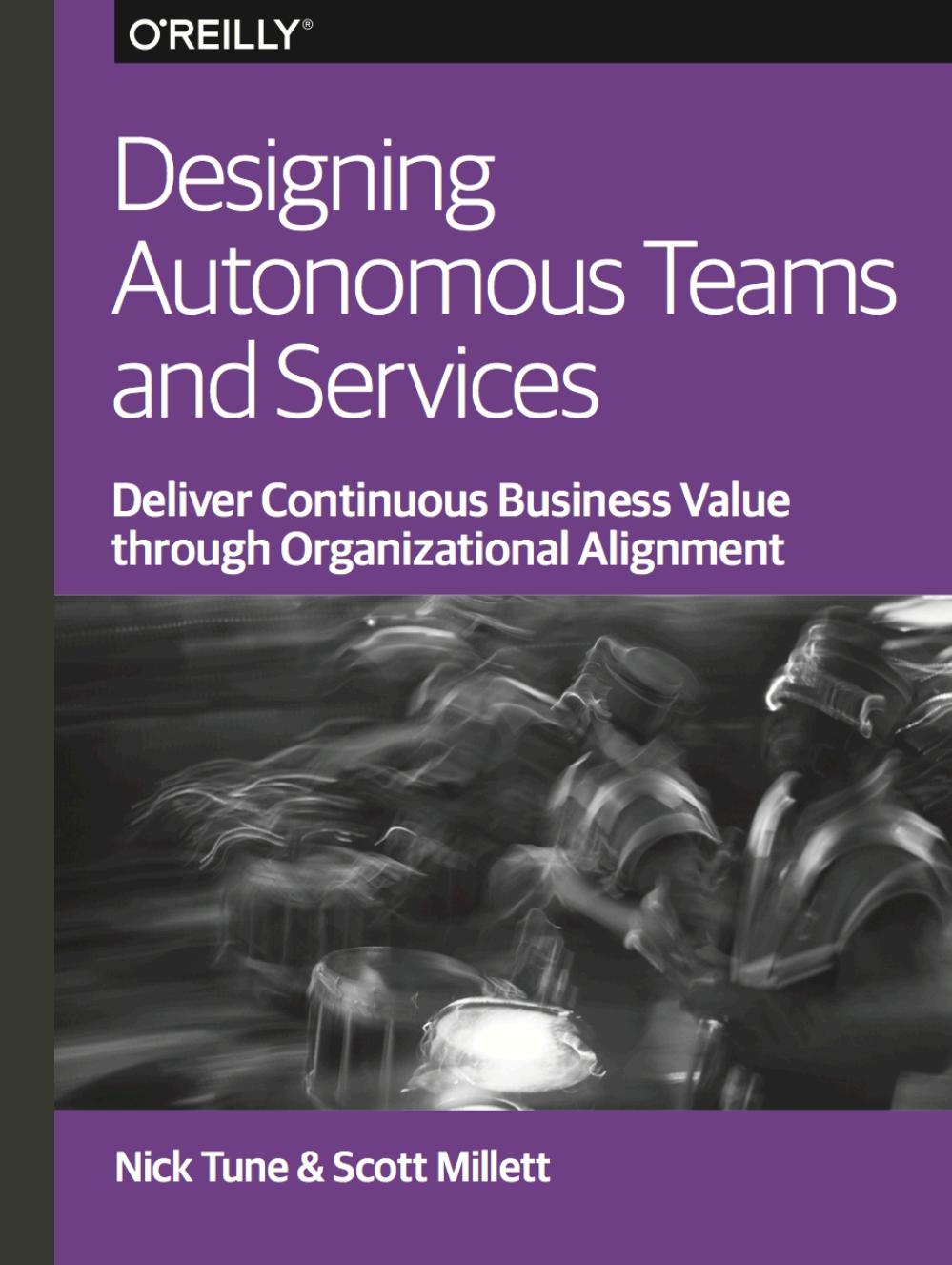
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