

I Told You So!

What every developer should know about Enterprise Architecture

Agata Przybyszewska





**Click 'Rate Session'
to rate session
and ask questions.**

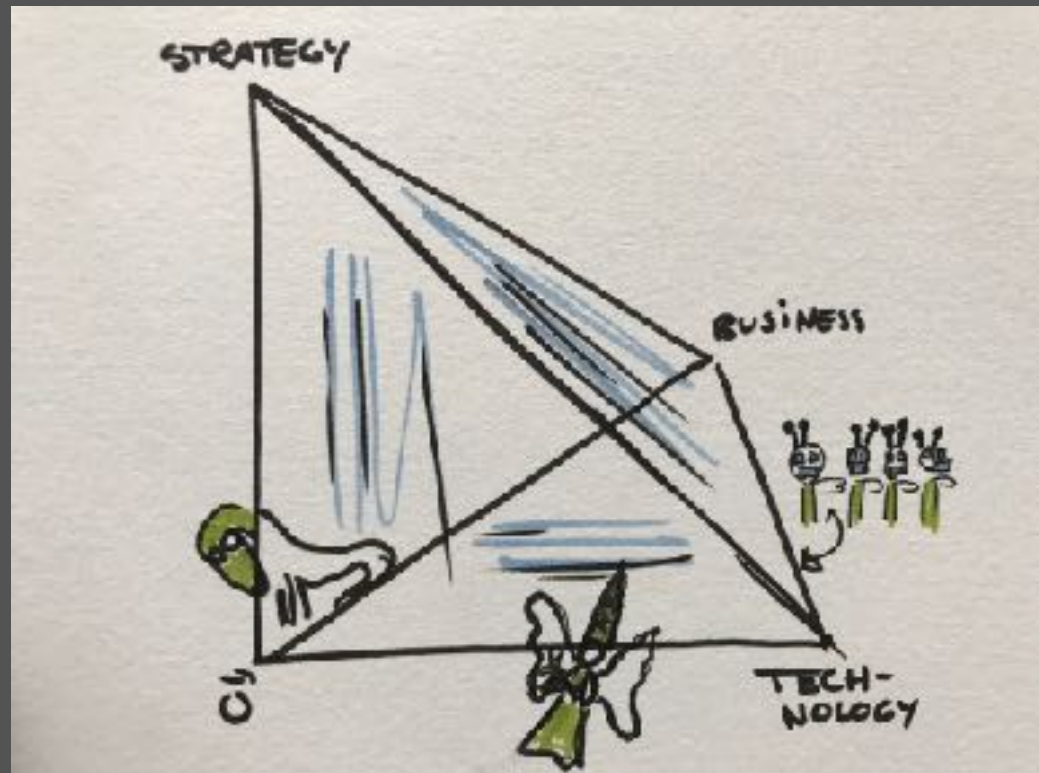


What every developer should know about Enterprise Architecture

- > Difference between building the right thing,
and building the thing right.
- > Interactive case study
- > Stop & think
- > Tools from the Enterprise Architecture toolbox
- > Empower you, to make right decisions



Huh, Enterprise Architecture?



Building the thing right

- > Right choice of technology
- > Right choice of process
- > Continuous feedback & learning
- > Agile Manifesto

<div>✓ JUnit Acceptance Test</div> <div>7 Passed Suites 3 months ago</div> <div>updates to JUnit daily</div>	<div>✗ Mercurial Chain</div> <div>7 Passed Suites 3 months ago</div> <div>manually build by Jenkins scheduler</div>	<div>✓ Acceptance Test JCK 1.6</div> <div>8 Passed 12 months ago</div> <div>manually build by Jenkins build</div>	<div>✓ CI Tests</div> <div>8 Passed 12 months ago</div> <div>manually build by Jenkins build</div>
<div>✓ Deploy</div> <div>8 Passed 12 months ago</div> <div>Scheduled build</div>	<div>✓ Remote Agent Functional</div> <div>8 Passed 12 months ago</div> <div>Scheduled build</div>	<div>✓ Static CI Tests</div> <div>8 Passed 12 months ago</div> <div>Updated by Jenkins CI</div>	<div>✓ Antission Command Line</div> <div>8 Passed 12 months ago</div> <div>Dependent on PROSEPT-PLUG-IN-258</div>
<div>✓ Hamcrest Findings Plugin</div> <div>8 Passed 12 months ago</div> <div>Dependent on PROSEPT-PLUG-IN-258</div>	<div>✓ Hamcrest Metric Aggregator</div> <div>8 Passed 12 months ago</div> <div>Dependent on PROSEPT-PLUG-IN-258</div>	<div>✓ Hamcrest Sandbox Plugin</div> <div>8 Passed 12 months ago</div> <div>Dependent on PROSEPT-PLUG-IN-258</div>	<div>✓ Hamcrest Sensor plugin</div> <div>8 Passed 12 months ago</div> <div>Dependent on PROSEPT-PLUG-IN-258</div>

Building the right thing

> What problem are you trying to solve?



Battles in Zombieland

> Get Ready, Player 1!

Welcome onboard,
Eva!

Eva is the new hire
in the Enterprise
Architecture team of
the Bank.



Decision Point:
Welcome

Eva, where would you like to
start?

> I would like an introduction to
the team, and the stakeholders:

Characters

> I have seen a "Danger! Zombies!"
sign on the door - can you

explain? Zombies



Meet the Characters



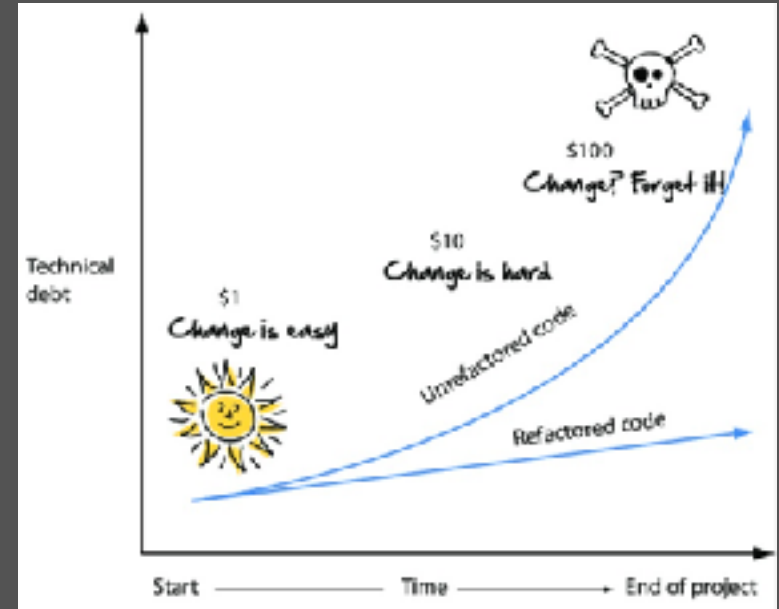
Danger! Zombies!

- > We have this ~~zombie problem~~ integration platform
- > Holds 3500 point to point connections ...
- > ... between 700 applications
- > ... with arcane business logic embedded
- > Significant technical debt



Tool: Technical Debt

- > In our universe, entropy is growing, and your system will get disorganised unless work is applied (refactoring)
- > Technical Debt is the continuous accumulation of
 - shortcuts
 - hacks
 - duplication
 - spaghetti code
 - excessive complexity
 - duplication, and general sloppiness
- > You pay interest of your debt in reduced productivity
- > Communicate with management in terms of
 - risk
 - return of investment
 - interest rates



Source: [The Agile Samurai by Jonathan Rasmusson](#)

Tool: Organizational Accountability

- > avoid abandoned orphans
 - data assets
 - firewall rules
 - connections
 - ETLs
 - applications
- > make it clear which part of the organisation owns the accountability
- > make the owner drive the solution



Tool: Get your ducks in line

- > Gather facts, not opinions
- > Document events
- > Statistics, logs
- > Build your case, get your ducks in line



Decision Point: Zombies

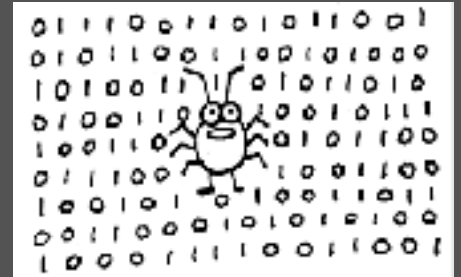
Roll your dice

- > [1..4] A developer approaches you, and has a worried face: [Log problems.](#)
- > [5] Today, there is a major production incident. All hands on deck!
- > [6] You have time to take a look at the promised reference architecture. We should start with organisational accountability.



Eva, we need a new database for the log

- > Jimmy is working in maintenance
- > You have told to gather facts, and they have installed a log monitor
- > The problem is, that the log monitor crashes
- > One of the zombies, a particular connection, generates over 1.000.000 exceptions/day
- > So, should we find a new monitoring tool?



The Regulator

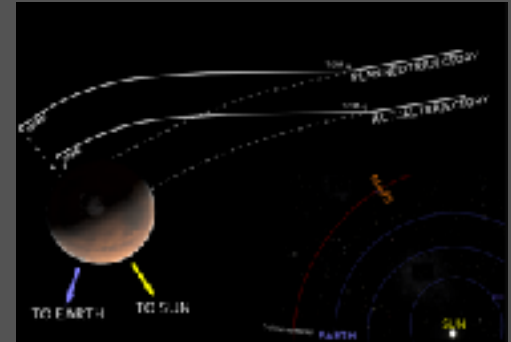
A regulator comes by
She is not happy
Do this or perish !
You have one year !

- > Seperation of duties
- > Security logging and monitoring
- > Site Failover test
- > This requires
 - a rewrite in most of all 700 ~~zombies~~ applications
 - a change to a hell of a lot of procedures



Tool: What can possibly go wrong?

- > What is the worst thing, that can happen?
- > Risk analysis
 - Gather the facts
 - Rank according to probability and seriousness
 - Decide: mitigate or not?



Mars Orbiter, 1999



Danish EFI, 2016

Decision Point: regulator

- > This has no value for our customers : Deny it
- > Do we want to keep our banking licence, lets start work immediately: Crunch
- > Maybe we should change something in the way this is designed?
Onboard the bosses



Onboard the Bosses

- > Stakeholder analysis
- > Target communication to audience
- > Line up your ducks, remember?





Eva prepares a single picture for the meeting with the bosses



Tool: Goals > Principles > Patterns > Capabilities

- > You want to build the right thing, so what should it do
- > Start with the goals - why are you doing this?
- > Use principles - your guide to avoid random decisions
- > Use patterns - the rough shape of a solution
- > What capabilities does it need to have?

-Would you tell me, please, which way I ought to go from here?

-That depends a good deal on where you want to get to, said the Cat.

-I don't much care where-" said Alice.

-Then it doesn't matter which way you go," said the Cat.

- Alice In Wonderland
Lewis Carroll



Eva prepares an Architecture design document

> Goals

- Organisational flexibility
- Data quality
- Compliance

> Principles

- All pieces of data shall have a data owner
- All data assets shall have a canonical message format, and thou shall use that only

> Architectural Patterns

- Event Driven Architecture

> Capabilities

- Reliable messaging system
- Security logging

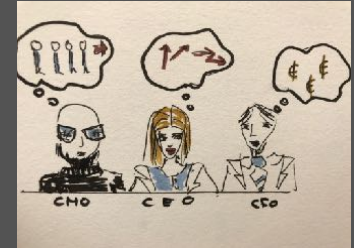


Decision point:

bosses

Roll your dice

- > [1..3] You don't have enough organisational capital, and your natural charisma is not sufficient. Suggestion rejected.
- > [4..6] You suggested target architecture fits well with the goals of the organisation. Eva, you are the product owner.



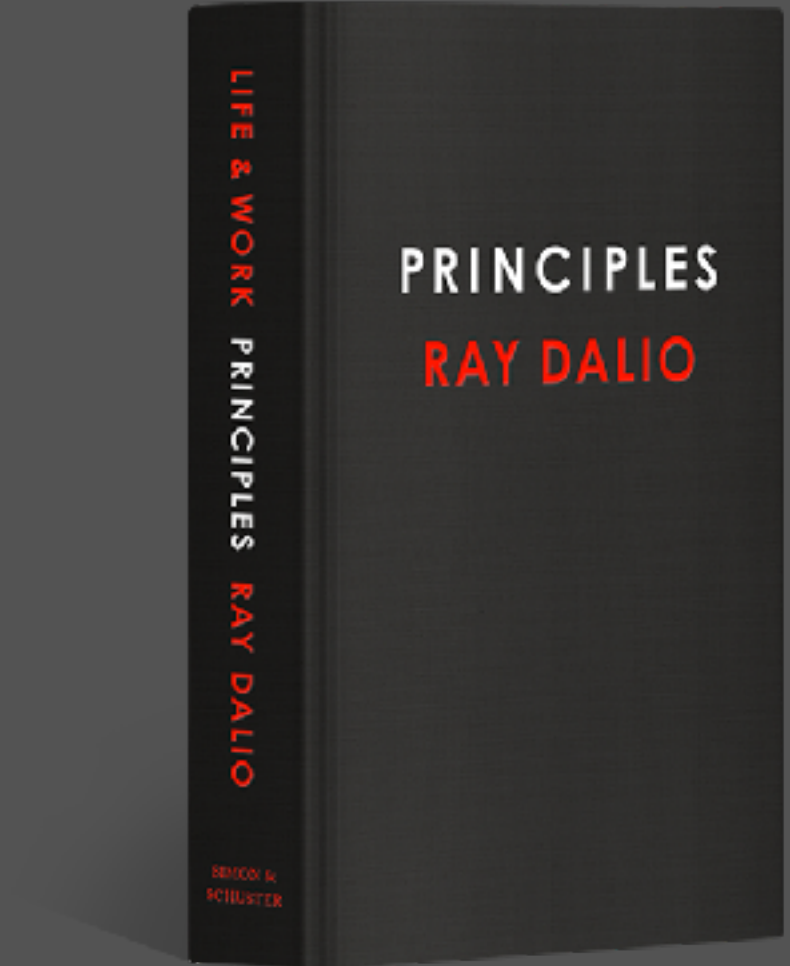
Go Online, or Go Home

- > Everyone is in panic
 - The Regulator, remember?
- > Can one new system really solve all problems?
- > You MUST show results
- > Deadline is near



Tool: Idea Meritocracy

- > set up structures to ensure ideas emerge
- > let the best idea win
- > voting, sharing



Decision Point: Go Online, or
Go Home

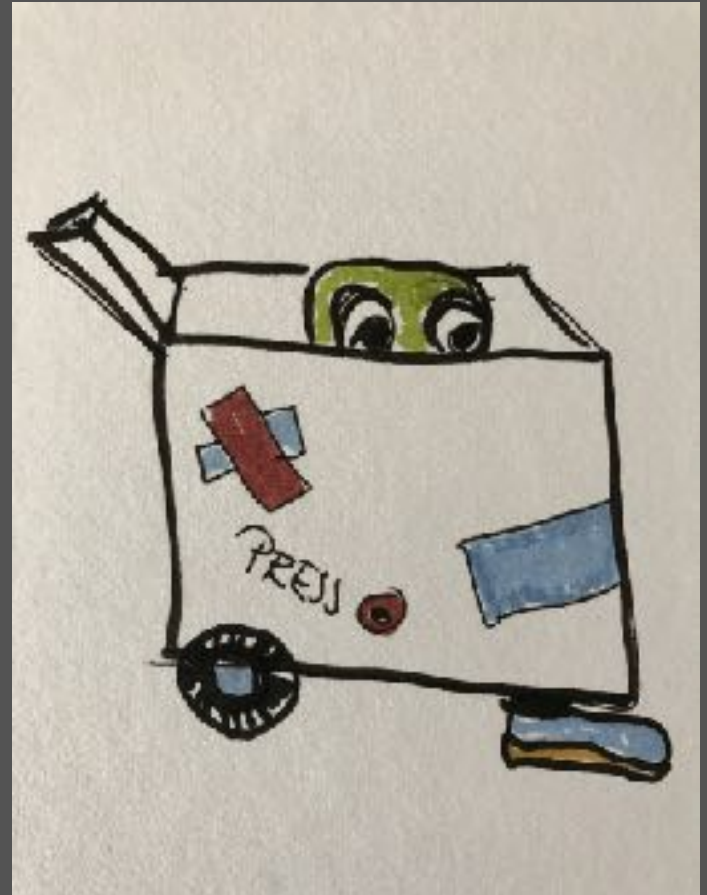
Roll your dice

- > [1..5] Keep crunching
- > [6] We are done with a
Minimal Viable Product
(MVP)

We Created This Monster

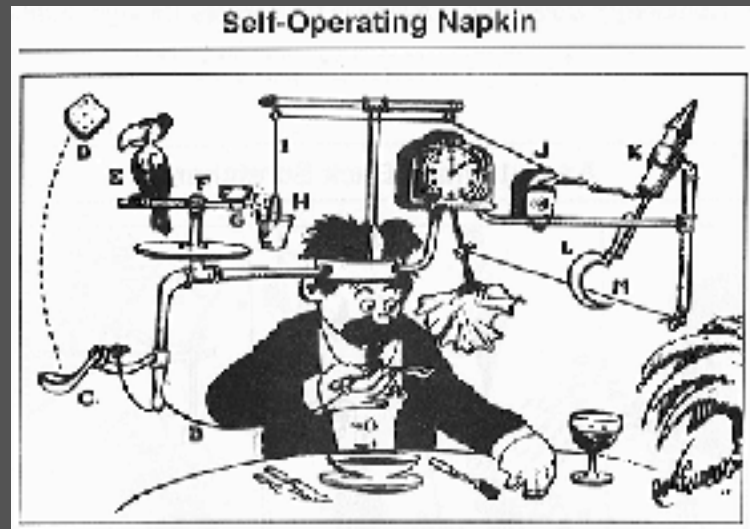
The MVP has arrived,
but ... er... is not
"exactly" as expected

Actually, we don't
like it



Tool: Experiment to Fail

- > Fail fast
- > Valuable feedback
- > Agile
- > Adapt & learn



Decision Point: Monster

- > Kiss the little monster: Kiss
- > This is the wrong MVP – go back and crunch more features: Crunch
- > Wrong turn, something is wrong with the architecture decision, go back to design! Redesign



Kiss the Little Monster

- > Embrace the ugliness of early versions
- > Your worst critic is probably right
- > Engage stakeholders, push information
- > Get it in production, for real
- > Is it useful?



Governance

>Whats in it for me?

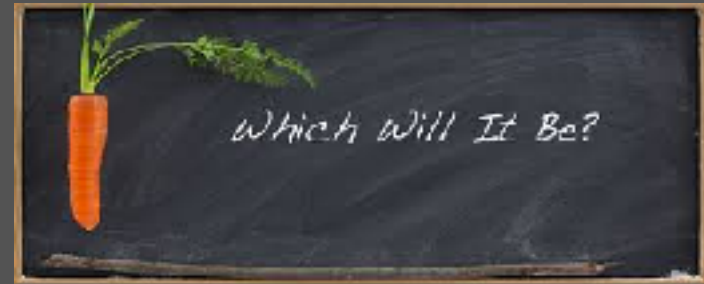
- Carrot

>This is not for me?

- Stick

>You get what you measure

- measure important stuff
- transparency
- information radiator





Eva prepares a governance model

- > If data is available in the new system, no contact with zombies is allowed
- > No changes will be performed (stick)
- > Well, if you really need it, you can have a 3 month exception
- > New system is really cool (carrot)
- > Measure the number of dead zombies

Happy Ending?

- > Keep crunching: 699 zombies left
- > Blame: you have made this complicated target architecture, and now we have 699 zombies and 1 new system!
- > Bye: you give up, and find a new job





Please

**Remember to
rate this session**

Thank you!



Did you **remember**
to rate the previous
session ?



goto;
copenhagen

 Follow us @gotocph