Why Architects Fail

10 Diseases You Should Know About

Stefan Tilkov, innoQ

@stilkov

innoQ

dis·ease (dĭ-zēz′)

n. A pathological condition of a part, organ, or system of an organism resulting from various causes, such as infection, genetic defect, or environmental stress, and characterized by an identifiable group of signs or symptoms.

n. A condition or tendency, as of society, regarded as abnormal and harmful.

n. Obsolete Lack of ease; trouble.

1. Over-Generalization Drive

Symptom: Seeing commonalities in everything and turning them into generic solutions

Phases in a Developer's Life

1. The Enthusiastic Developer

"This stuff is cool - let's build programs! For real people!"

Create Customer	Create Product	Create Order
Find Customer	Find Product	Find Order
List Customers	List Products	List Orders
Edit Customer	Edit Product	Edit Order
Delete Customer	Delete Product	Delete Order

Boring, boring, boring.

2. The Disillusioned Developer

"Oh. Real people have boring problems."

Create Customer	Create Product	Create Order
Find Customer	Find Product	Find Order
List Customers	List Products	List Orders
Edit Customer	Edit Product	Edit Order
Delete Customer	Delete Product	Delete Order

Create Thing

Find Thing

List Thing

Edit Thing

Delete Thing

3. The Enthusiastic Architect

Create Thing

Find Thing

List Thing

Edit Thing

Delete Thing

"Generic solutions! Cool!"

4. The Disillusioned Architect

KISS

YAGNI

Lean

Minimable viable product

Story focus

" When you go too far up, abstraction-wise, you run out of oxygen. Sometimes smart thinkers just don't know when to stop, and they create these absurd, all-encompassing, high-level pictures of the universe that are all good and fine, but don't actually mean anything at all.

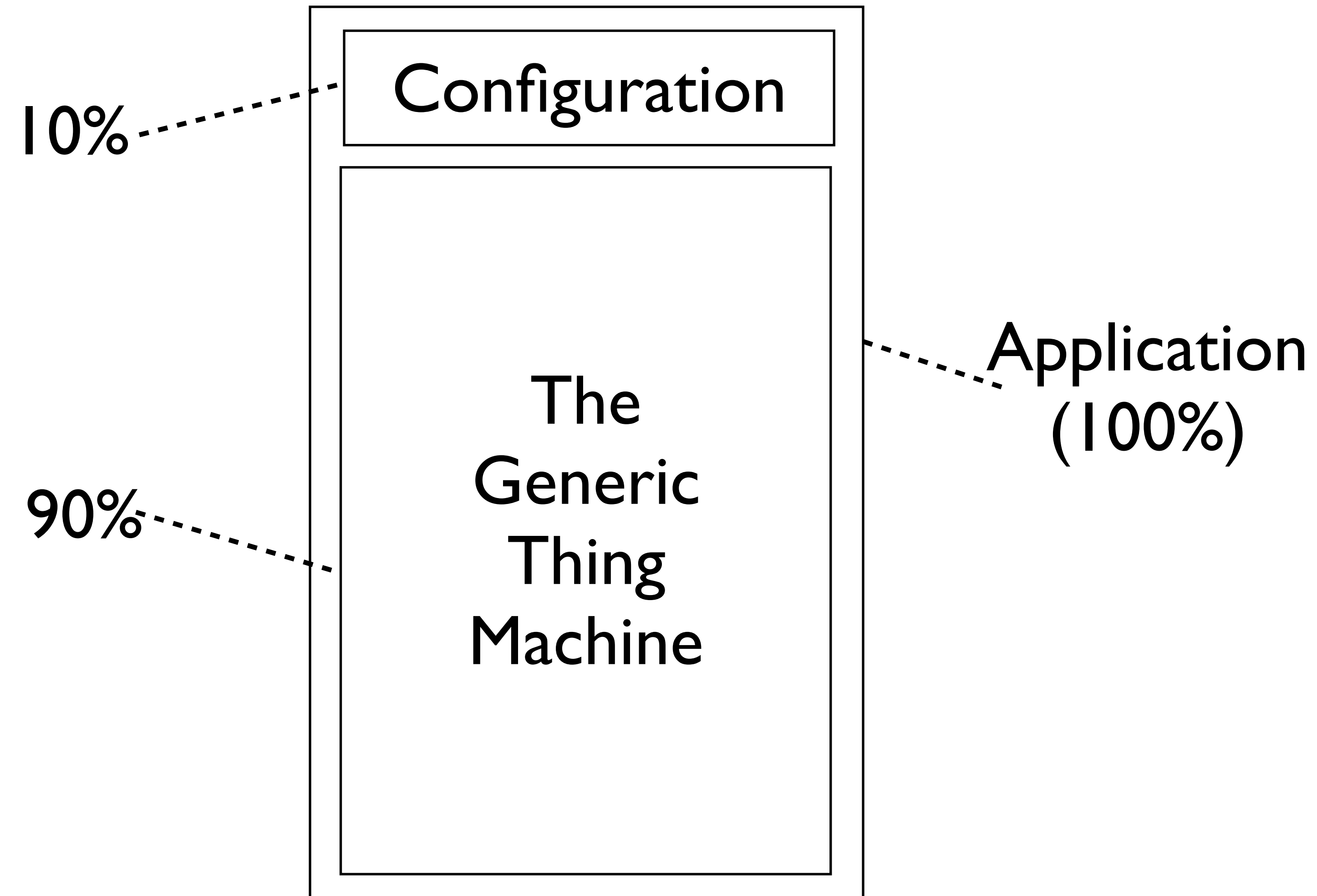These are the people I call Architecture Astronauts.

Joel Spolsky

5. The "Wise" Architect

Question: *

Answer: It depends.

2. Domain Allergy

<u>Symptom</u>: Treating the domain as a negligible nuisance
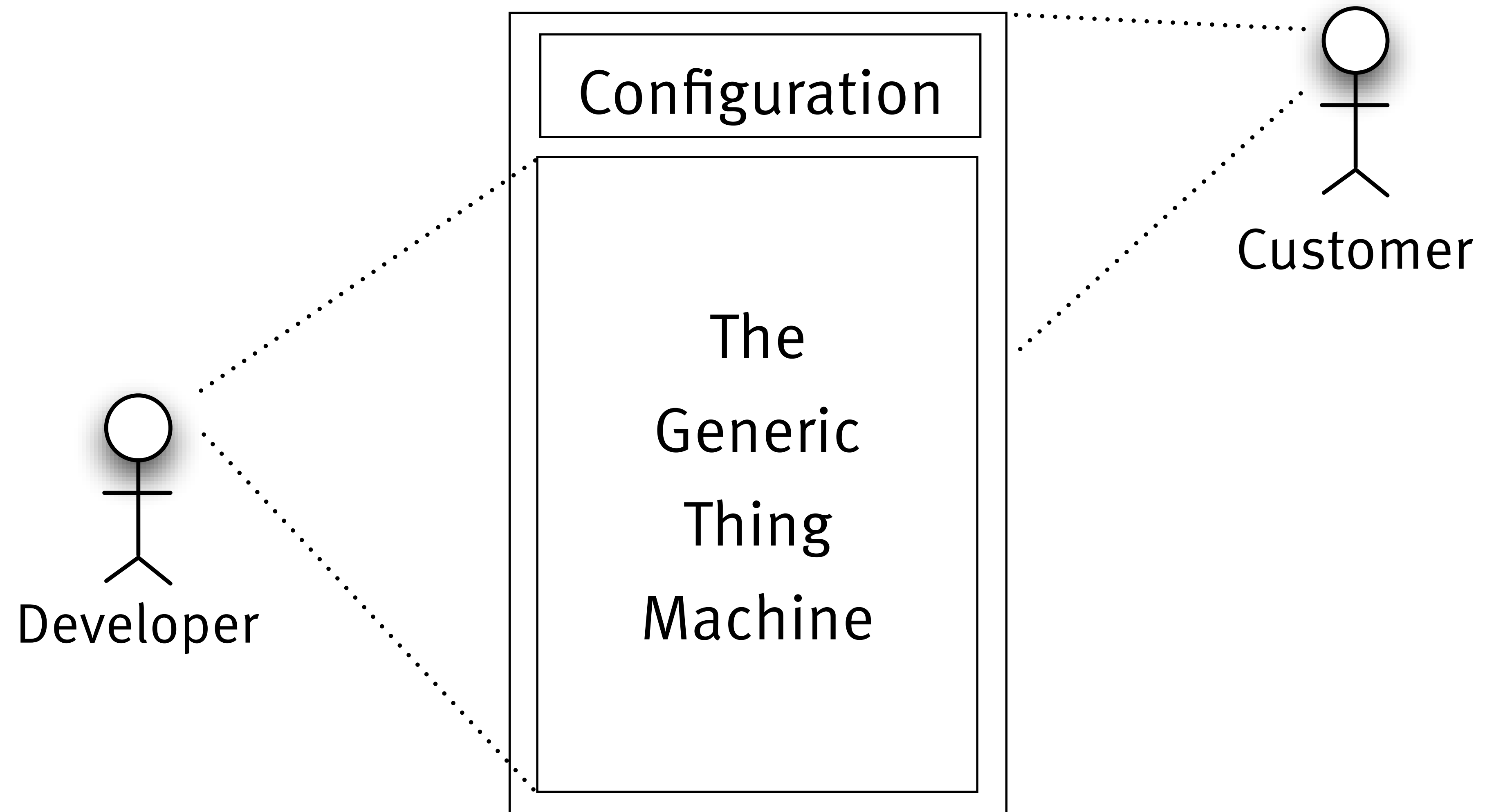
Functionality: | 80% | 20%

Time/Effort: | 80% | 320%

The benefits of choices already made

Microsoft .NET + Visual Studio

Ruby on Rails

SAP et. al.

3. Obsessive Specialization Disorder

<u>Symptom</u>: Believing every problem to be unique, even if it's been solved 1,000 times

Task: Read a file of text, determine the *n* most frequently used words, and print out a sorted list of those words along with their frequencies.

Donald Knuth

10-page literal
Pascal program,
including innovative
new data structure

Doug McIlroy

```
tr -cs A-Za-z '\n' |
tr A-Z a-z |
sort |
uniq -c |
sort -rn |
sed ${1}q
```

<u>Symptom</u>: Believing everything needs to be a perfect match to your environment to be usable.

4. Unhealthy Complexity Attraction

Symptom: Being so smart you can't be bothered by simple approaches.
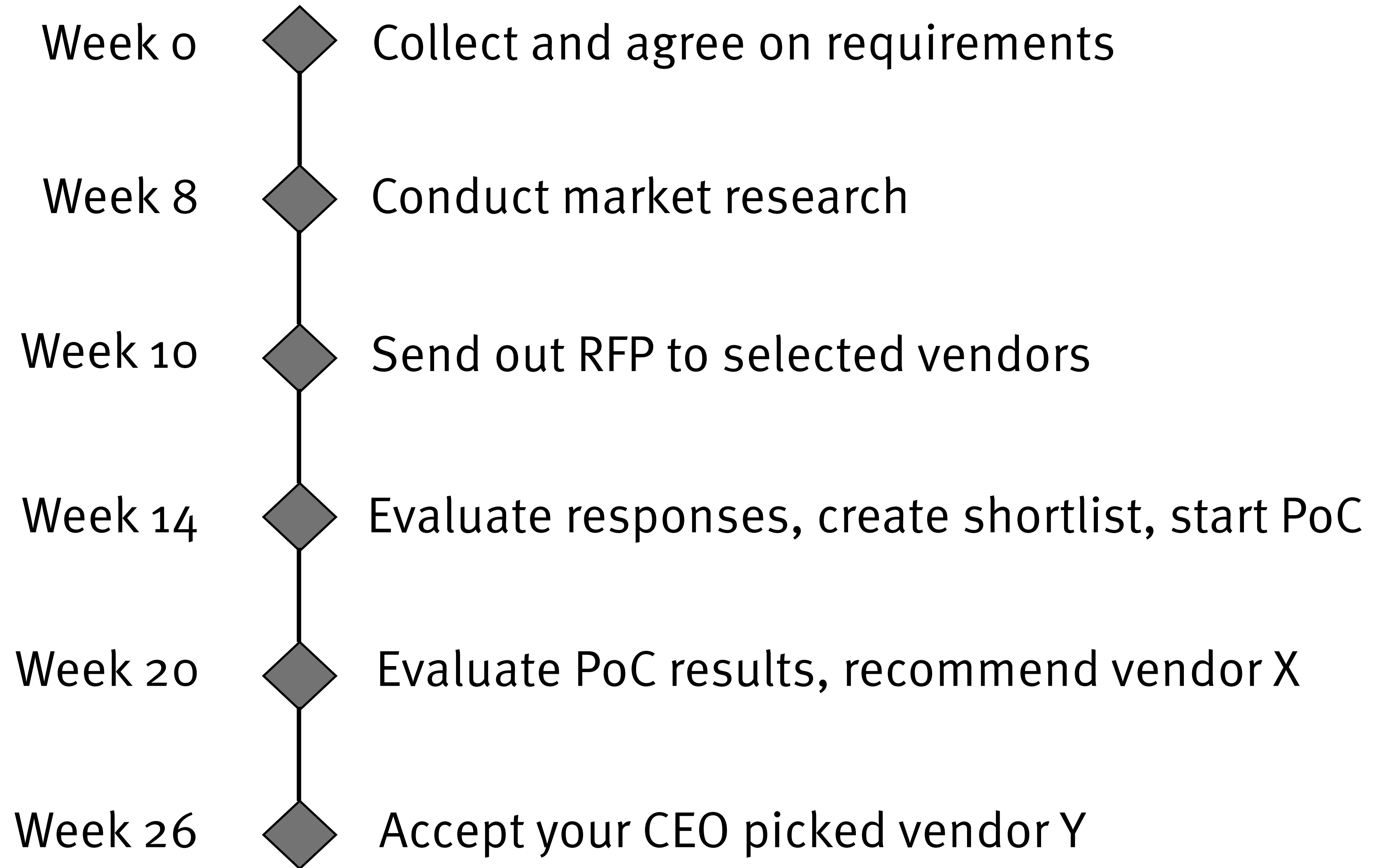
Benefits of Complexity

> Challenging work

> New and interesting experience

> Self-esteem

> Community

> Barrier to entry

> Job security

5. Analysis Paralysis

<u>Symptom</u>: Taking longer to evaluate than to actually do it

Vendor Selection

Week 0 — Collect and agree on requirements

Week 8 — Conduct market research

Week 10 — Send out RFP to selected vendors

Week 14 — Evaluate responses, create shortlist, start PoC

Week 20 — Evaluate PoC results, recommend vendor X

Week 26 — Accept your CEO picked vendor Y

6. Innovation Addiction

(a.k.a. Phase o Fixation)

Symptom: Things become progressively less fun the closer you get to production.

" Mindful choice of technology gives engineering minds real freedom: the freedom to contemplate bigger questions. Technology for its own sake is snake oil.

Dan McKinley

http://mcfunley.com/choose-boring-technology

7. Severe Tunneling Fixation

Symptom: Enforcing an architectural approach that clashes with the framework, libraries or tools you use.

" I know what I like

And I like what I know ...

Genesis

8. Asset Addiction

Symptom: Becoming so attached to a particular tool/ library/framework it becomes a fit for every problem.

<u>Symptom</u>: Using fashionable technology because it's popular (a.k.a. fallacy of argument by authority)

9. Exaggerated Risk Aversion

Symptom: Sticking with horrible, horrible, HORRIBLE tools because they're there

Symptom: Confusing "easy" with simple, creating accidental complexity

simple   easy

complex   hard

10. Impact Dissonance

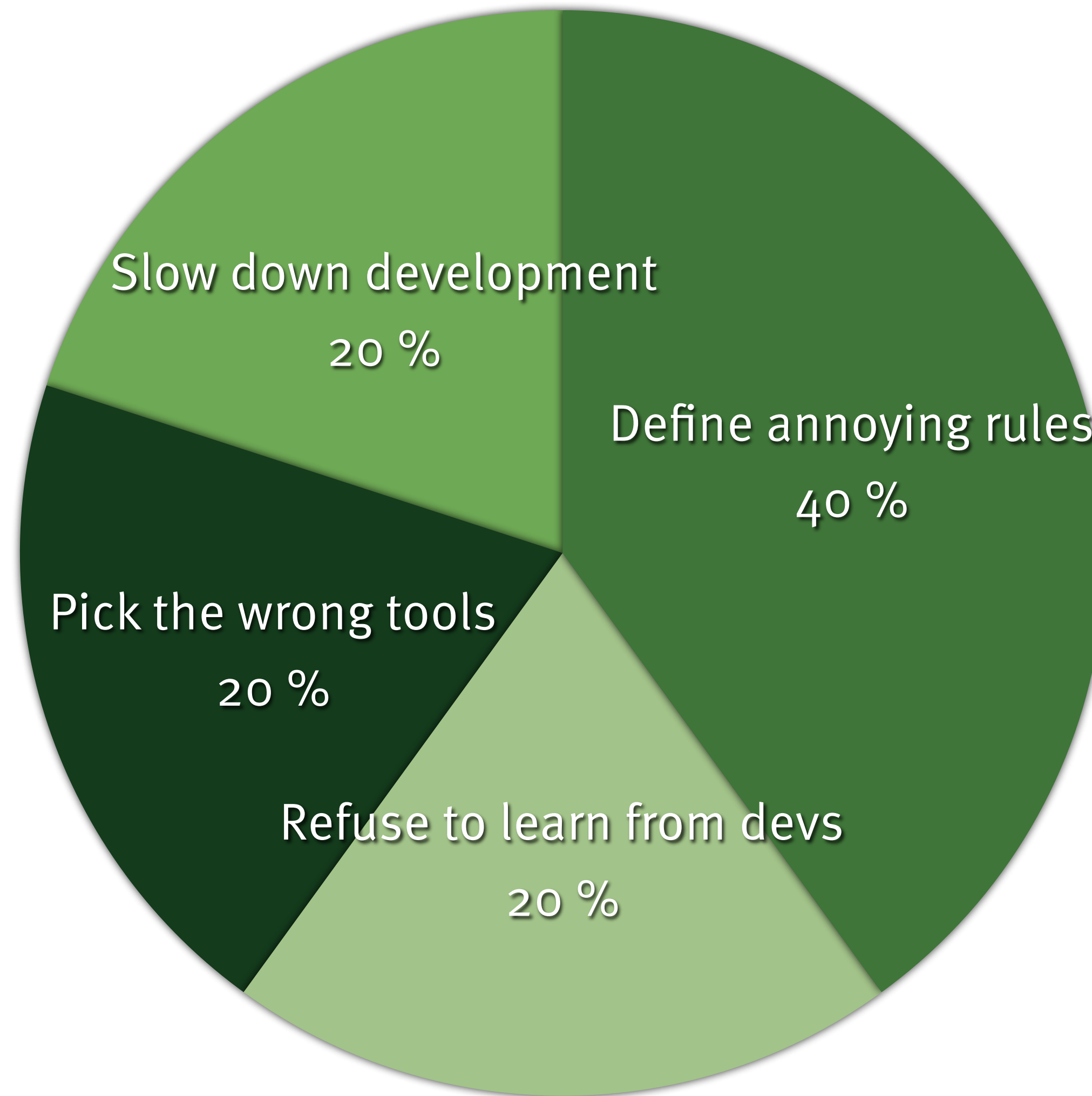*Symptom: Becoming too detached from the actual system that is being delivered*

Related:
Governance Megalomania

<u>Symptom</u>: Believing everything has to be approved by you to ensure it meets architecture standards

What architects want to do
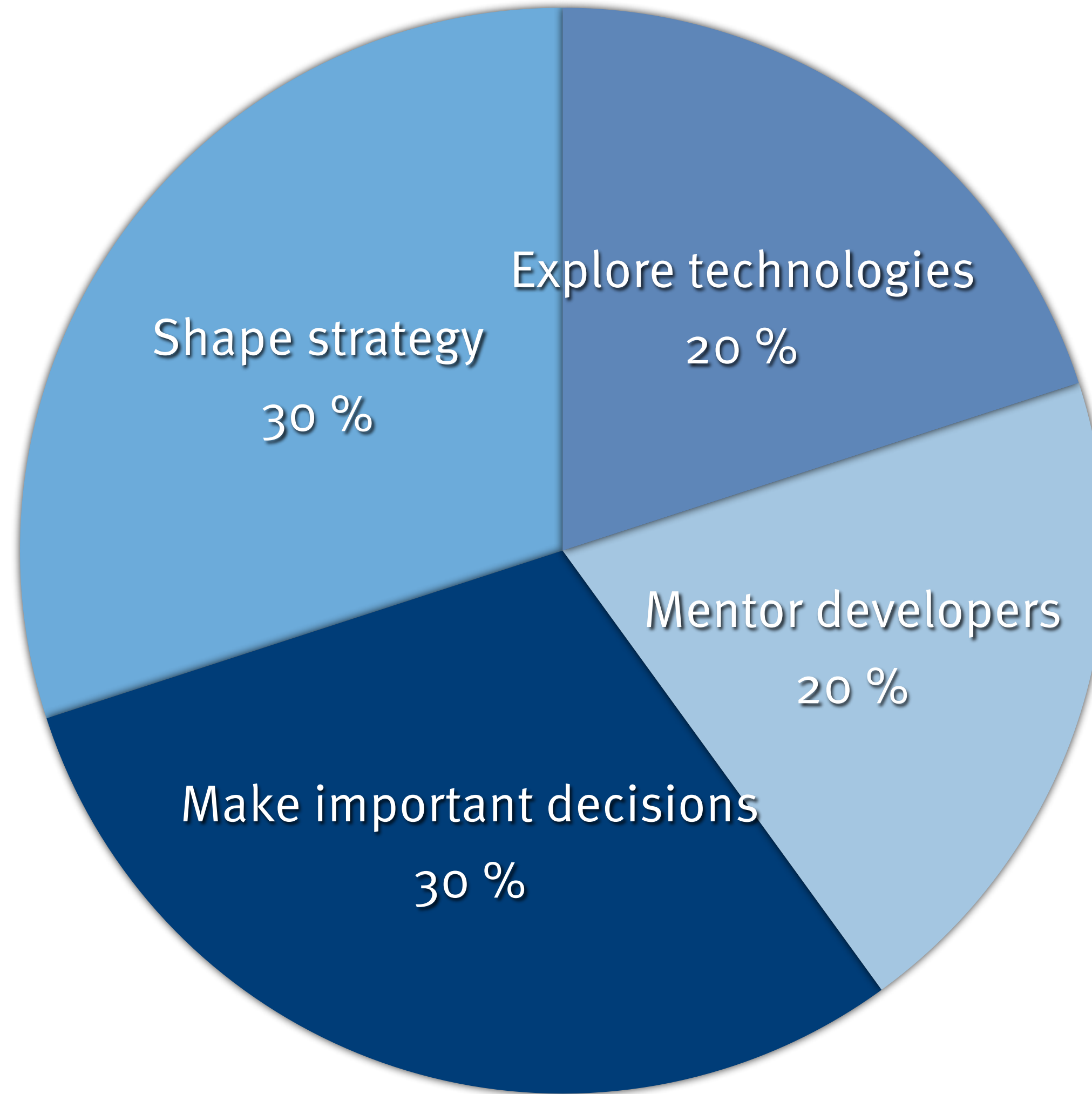
What others think architects do

> "Architect" is Latin
> for "Can't code anymore."

Ted Neward
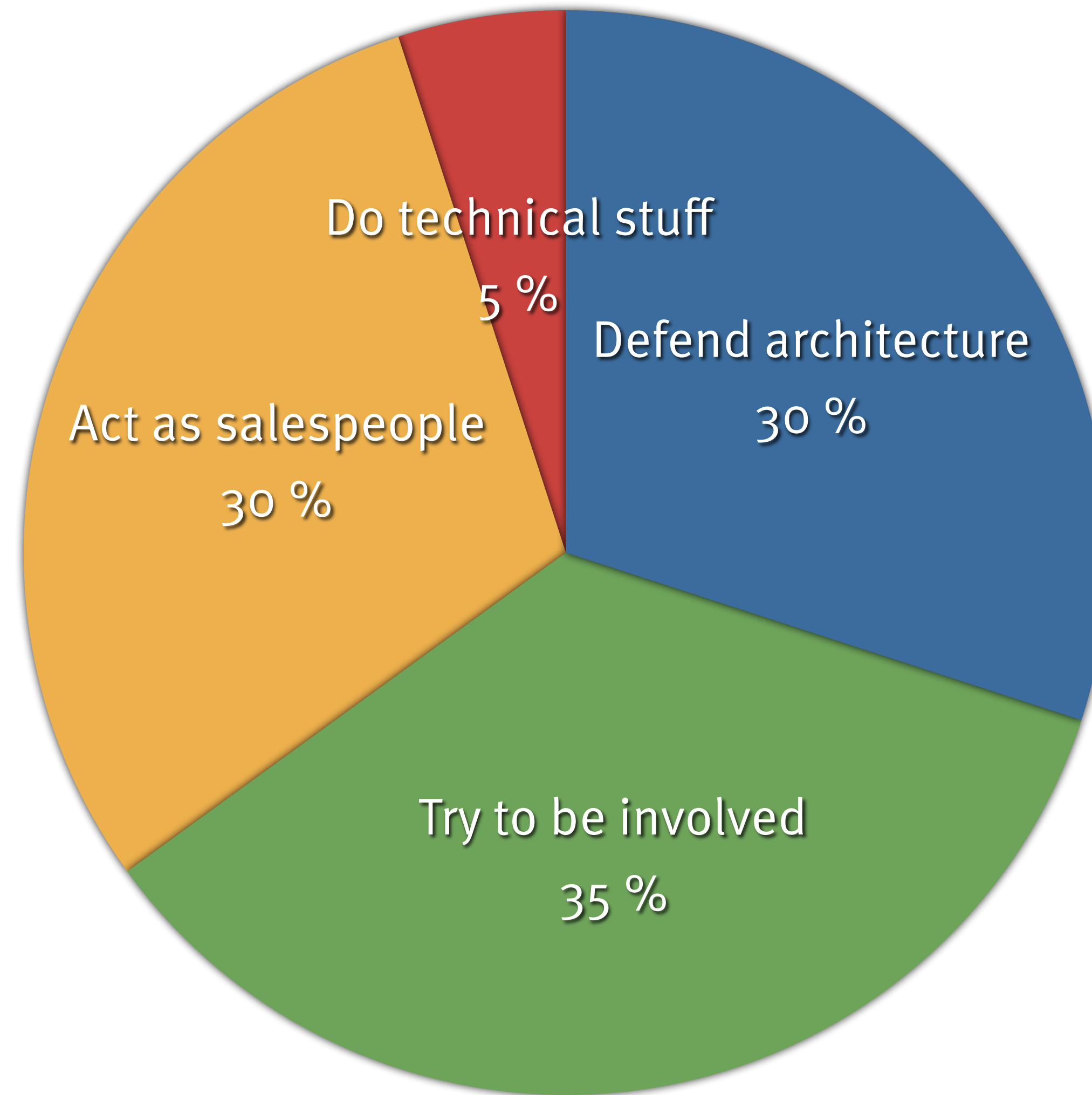
What architects *actually* do

I don't have an answer …

… so here's one, anyway

An Architect's Success Formula

Dogma and rules	10 %
Experience	20 %
Pragmatism	20 %
Flexibility	10 %
Minimalism	10 %
Trends and future needs	10 %
Experiments & PoCs	10 %
Hands-on participation	10 %
Vendor advice	0 %

Thank you –
that's all I have.

@stilkov

Stefan Tilkov

stefan.tilkov@innoq.com

Phone: +49 170 471 2625