An Architect's World View

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Senior Knowledge Engineer
Software Education

Value

- Individuals and interactions
- Working software
- Customer collaboration
- Responding to change

Over

- Processes and tools
- Comprehensive documentation
- Contract negotiation
- Following a plan

Slide 3

Welcome changing requirements	Deliver frequently	Work together daily
Satisfy the customer	Motivated individuals	Face-to-face communication
Progress is working software	Sustainable development	Continuous attention to excellence
Simplicity	Self-organizing teams	Reflection

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Slide 4

Practices
- **Things we do** that carry out the principles
- Sustainable pace, stand-ups, retrospectives, co-location, adaptive planning, continuous feedback, frequent small releases, refactoring, pair programming, test-driven development, automated testing, continuous integration, Kanban, etc.

Principles
- **Guide us** when applying our values
- Welcome change, deliver frequently, work together, satisfy customer, motivated individuals, face-to-face, working software, sustainable development, excellence, simplicity, self-organising teams, reflection

Values
- Characteristics that can be **prioritised**
- People, working software, collaboration, responding to change

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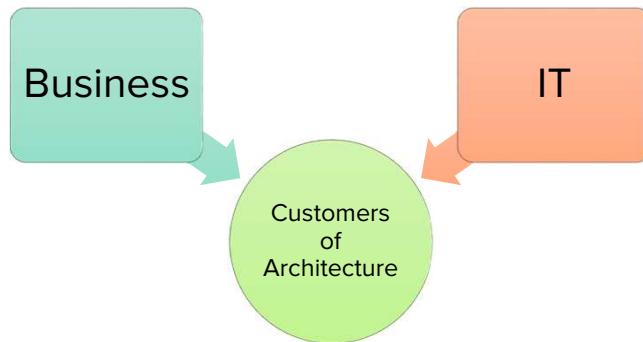
Values

- Characteristics that can be *prioritised*

People

" He aha te mea nui o te ao?
He tangata!
He tangata!
He tangata!
Maori proverb

Business

IT

Customers
of
Architecture

The Big Picture

" The presence (or absence) of a strong architectural vision is a key predictor in the success (or failure) of a complex system.

Grady Booch

> Today I am more convinced than ever. Conceptual integrity is central to product quality. ***Having a system architect is the most important single step toward conceptual integrity.***
>
> **Fred Brooks**

Humility

> Humility is the embarrassment you feel when you tell people how wonderful you are.
>
> **Laurence Peter**

> " Leaders don't see themselves as your boss. *They see themselves as your enabler.* That is, they make their own role to be the destroyer of barriers.
>
> **John Maxwell**

Teamwork

ISTJ	ISFJ	INFJ	INTJ
ISTP	ISFP	INFP	INTP
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ

Integrity

" Whoever is careless with the truth in small matters cannot be trusted with important matters.

Albert Einstein

> **"** If it is not right do not do it; if it is not true do not say it.
>
> **Marcus Aurelius**

Values

- Characteristics that can be **prioritised**
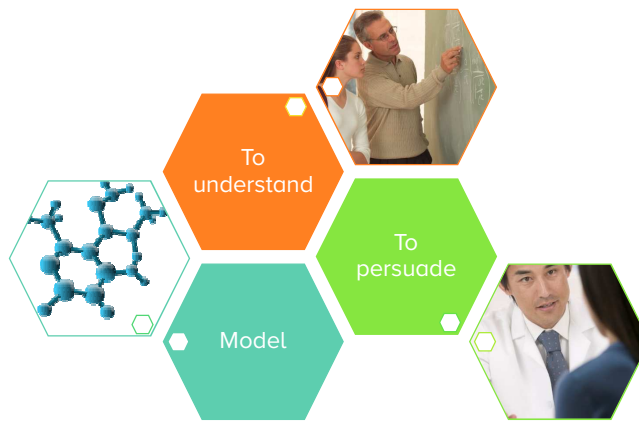- People, the big picture, humility, teamwork, integrity
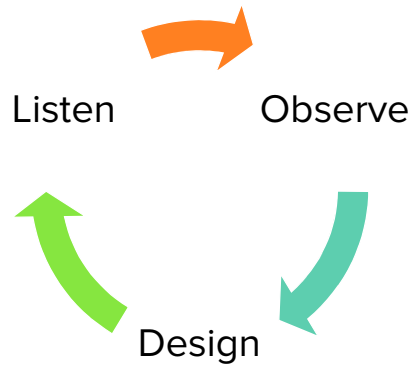
Principles

- *Guide us* when applying our values

Communicate

To understand

To persuade

Model

"

Seek to understand before seeking to be understood.

Steven Covey

Listen   Observe

Design

Involve Everyone

"

What separates those who achieve from those who do not is in direct proportion to **one's ability to ask for help**.
Donald Keogh

Simplicity

> " Simplicity is a prerequisite for reliability.
> **Edsger Dijkstra**

Model for a purpose

Patterns add complexity

Less means more

> There are two ways of constructing a software design. One way is to make it **so simple** that there are **obviously no deficiencies**. And the other way is to make it **so complicated** that there are **no obvious deficiencies**.
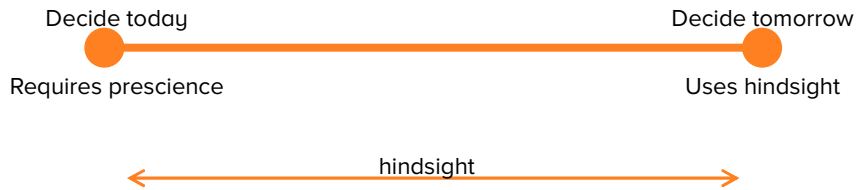
Tony Hoare

> Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage – to move in the opposite direction.
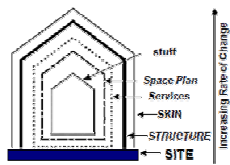
Albert Einstein

Just-In-Time Design

Decide today   Decide tomorrow

●━━━━━━━━━━━━━━━━━━━━━━━━━━●

Requires prescience   Uses hindsight
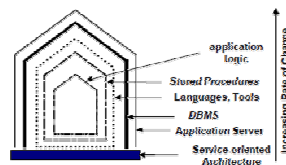
←─────────────── hindsight ───────────────→

Building Layers

How Buildings Learn
Stewart Brand

Software Architecture Layers

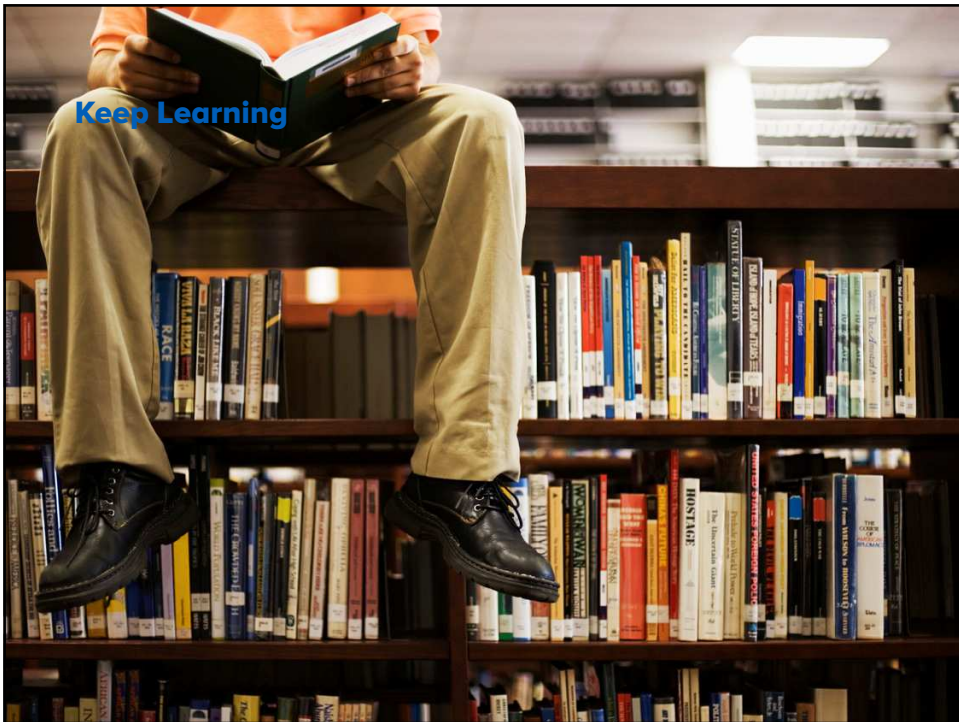Architects: Anchors or Accelerators to Organisational Agility?
Jim Highsmith

Deliver Working Solutions

29

Keep Learning

" It is insanity to continue doing the same thing over and over and expect the results to be different.

Albert Einstein

Those who do not remember the past are *condemned to repeat it*.

George Santayana

" There are three kinds of men. The one that learns by reading. The few who learn by observation. The rest of them have to pee on the electric fence for themselves.
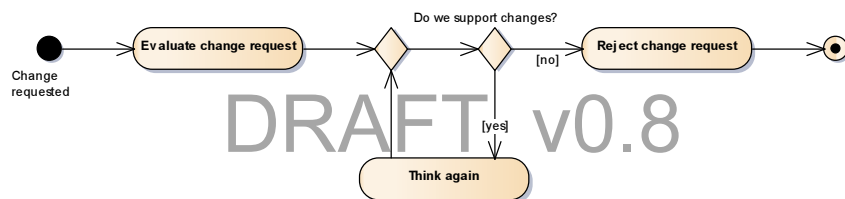
Will Rogers

Quality

✔	Plan for testing
✔	Trust your instincts
✔	Just good enough

Manage Change and Complexity

Do we support changes?

● → Evaluate change request → ◇ ◇ [no] → Reject change request → ◉

Change requested

DRAFT v0.8

[yes]

Think again

" Design for ~10X growth, but plan to rewrite before ~100X

Jeff Dean

Principles

- **Guide us** when applying our values
- Communicate, involve everyone, simplicity, just-in-time design, deliver working solutions, keep learning, quality, manage change and complexity

Practices

- **Things we do** that carry out the principles

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30,000 Feet and Climbing

Real-World Disconnect

Detailed Modelling

> The trick to forgetting the big picture is to look at everything close-up.
>
> **Chuck Palahniuk**

Gold Plating

Buzzword-Driven Architecture

" We're going to use microservices running with MEAN on EC2 in the cloud.
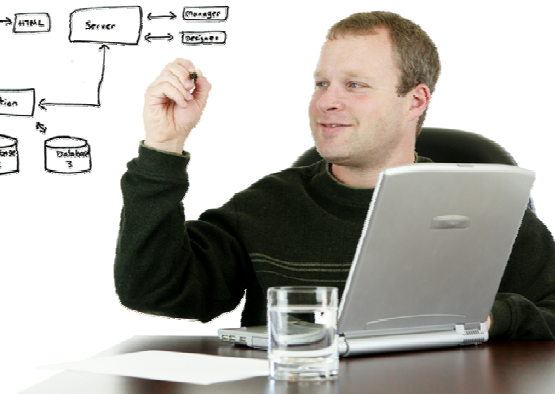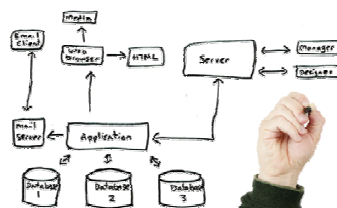
Ivory Tower Architecture

Perfectionism

" It's not ready yet.

Ego-Driven Architecture

Tester Can't Draw the High-Level Design

Practices

- ***Things we do*** that carry out the principles
- Anti-patterns: 30,000 feet, real-world disconnect, detailed modelling, gold plating, buzzword-driven, ivory tower, perfectionism, ego-driven, tester can't draw the design

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Practices

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"

Culture isn't just one aspect of the game – it is the game.

Lou Gerstner

"

Culture eats strategy for breakfast.

Peter Drucker

> **"** Those who are possessed of a definitive body of doctrine and deeply rooted convictions will be in a much better position to deal with the shifts and surprises of daily affairs than those who are merely taking short views.
>
> **Sir Winston Churchill**

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