



Patterns, Wikis, and Agility: where they came from... where are they heading to...

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“Software Engineering is the application of a systematic, disciplined, quantifiable approach to the development, operation and maintenance of software, i.e. the application of engineering to software.”

[IEEE Computer Society]

Software development requires...

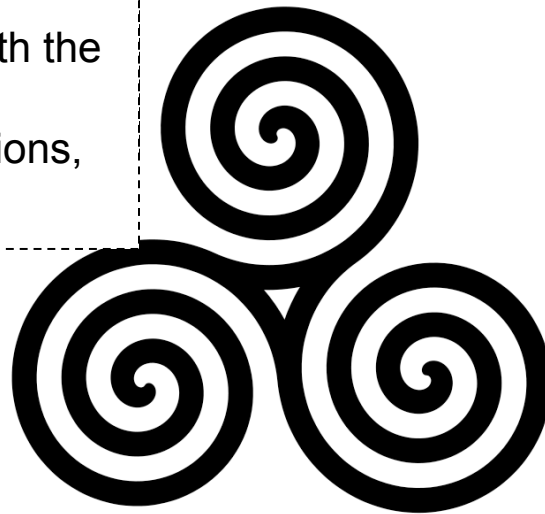
To collaborate, we need to share information and artifacts.

Different kinds of artifacts are typically produced and presented using different tools and environments.

artifacts (meeting notes, requirements, draft designs...) with the goal of producing more **formal artifacts** (code, formal specifications, models...).

Communicating and sharing knowledge and experience

Formalizing information



continuously and iteratively

“Developers = Knowledge-Workers”

- Why?
- Software development is:
 - a knowledge-intensive activity
 - a knowledge creation, acquisition and transformation process
 - a **social activity**, carried by a community of customers, developers, domain experts, etc, mediated through artifacts

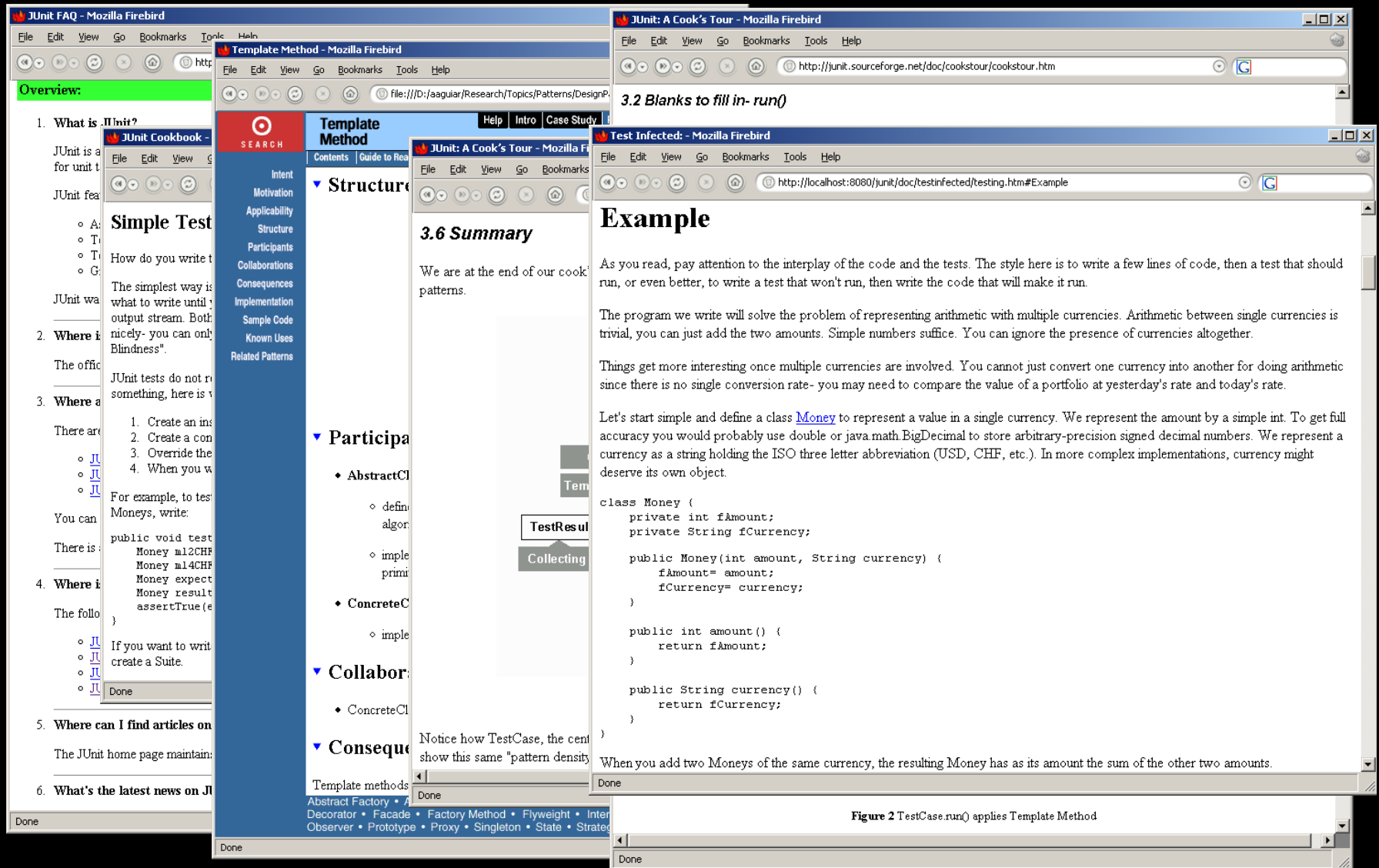


Figure 2 TestCase.run() applies Template Method

Devil is in details...



How to document best practices?

How to capture and disseminate expertise?

Patterns Origins - Alexander

- The initial goal was to enable non-experts to architect and design their own houses and communities.
- This work resulted on several books:
 - *“A Pattern Language”*
 - *“The Timeless Way of Building”*
 - *“The Oregon Experiment”*
 - ...
 - *“The Nature of Order”, vol. I, II, III, IV.*

<http://c2.com/cgi/wiki?ChristopherAlexander>



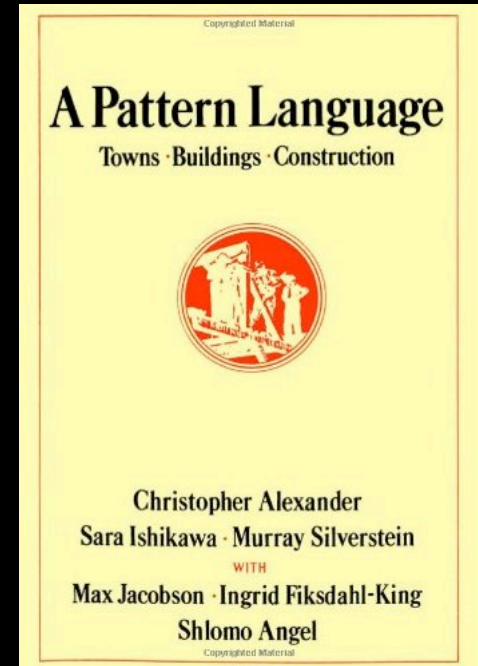
“A Pattern Language” [Alexander77]

- 253 patterns
- Pattern definition

“Each pattern describes a problem that occur over and over again in our environment and then describes the core of the solution to that problem in such a way that you can use this solution a million times over without ever doing it the same way twice” [Alexander77, p. x]

- Shorter definition

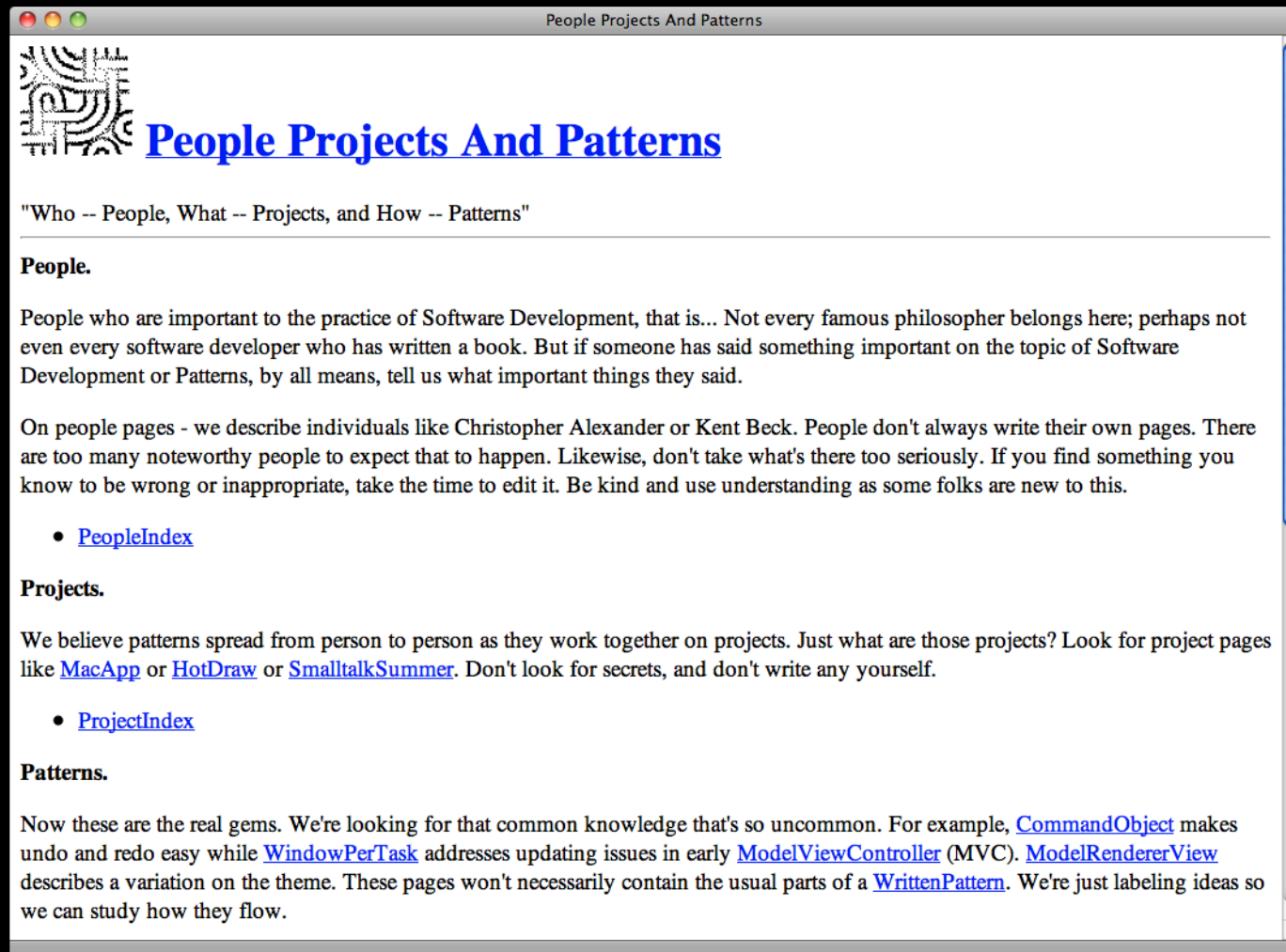
– Patterns are a *textual* description of a *generic solution* for a *recurrent problem* in a specific *context*.



“A Pattern Language”: examples

- 253 patterns: from global to particular
 - In “A Pattern Language” are described 253 patterns, interrelated, varying on the level of detail, starting from the global to particular.
- Some examples:
 - 1. Independent Regions
 - 2. The Distribution of Towns
 - 16. Web of Public Transportation
 - 83. Master and Apprentices
 - 134. Zen View
 - 251. Different Chairs
 - 253. Things from your life

"The" Wiki



<http://c2.com>

1995

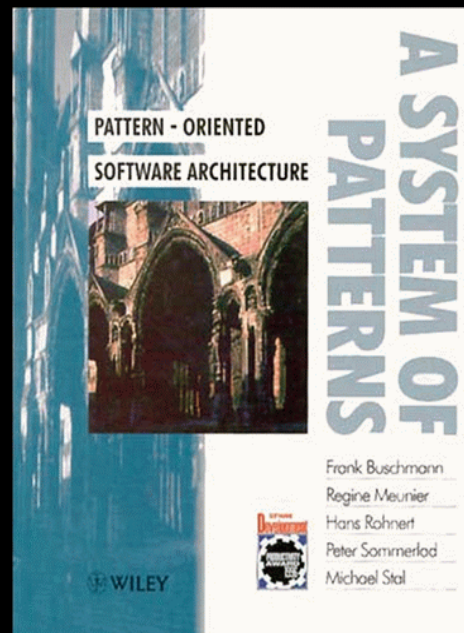
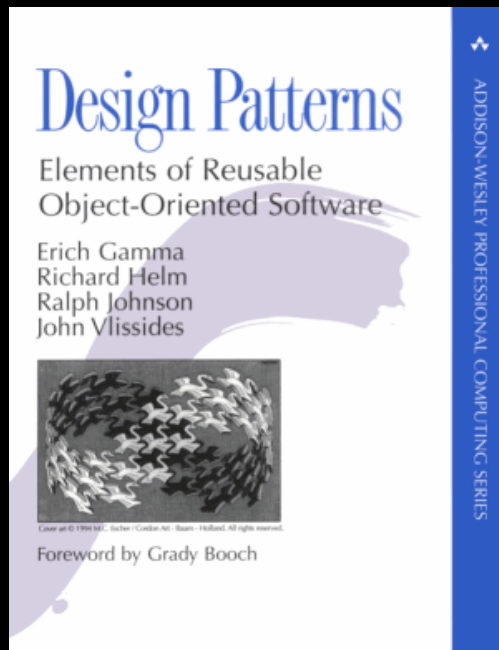
- “**Wiki**” is a composition system; it's a discussion medium; it's a repository; it's a mail system; it's a tool for collaboration. Really, we don't know quite what it is, but it's a fun way of communicating asynchronously across the network.”

[Ward Cunningham, <http://c2.com>]

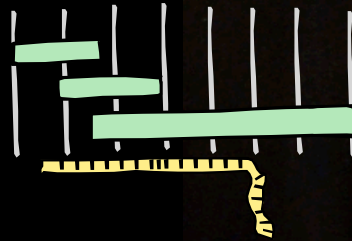
The Wiki Way

Open, Incremental,
Organic, Mundane,
Universal, Overt, Unified,
Precise, Tolerant,
Observable, Convergent

1995, 1996 ...



Question Types				
Multiple Choice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple Choice (MCQ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
True/False	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes/No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Scale Input	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scoring (Long)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scoring (True)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short Answer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short Answer (Essay)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short Answer (Text)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Display				
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More (2D)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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More (2D)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Display Options				
Request Help	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right/Wrong Feedback	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Results Graph	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Platform				
Available for Web and PC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>





ASD

dX

PSP

RUP

XM

DSDM

UP

TSP

Crystal

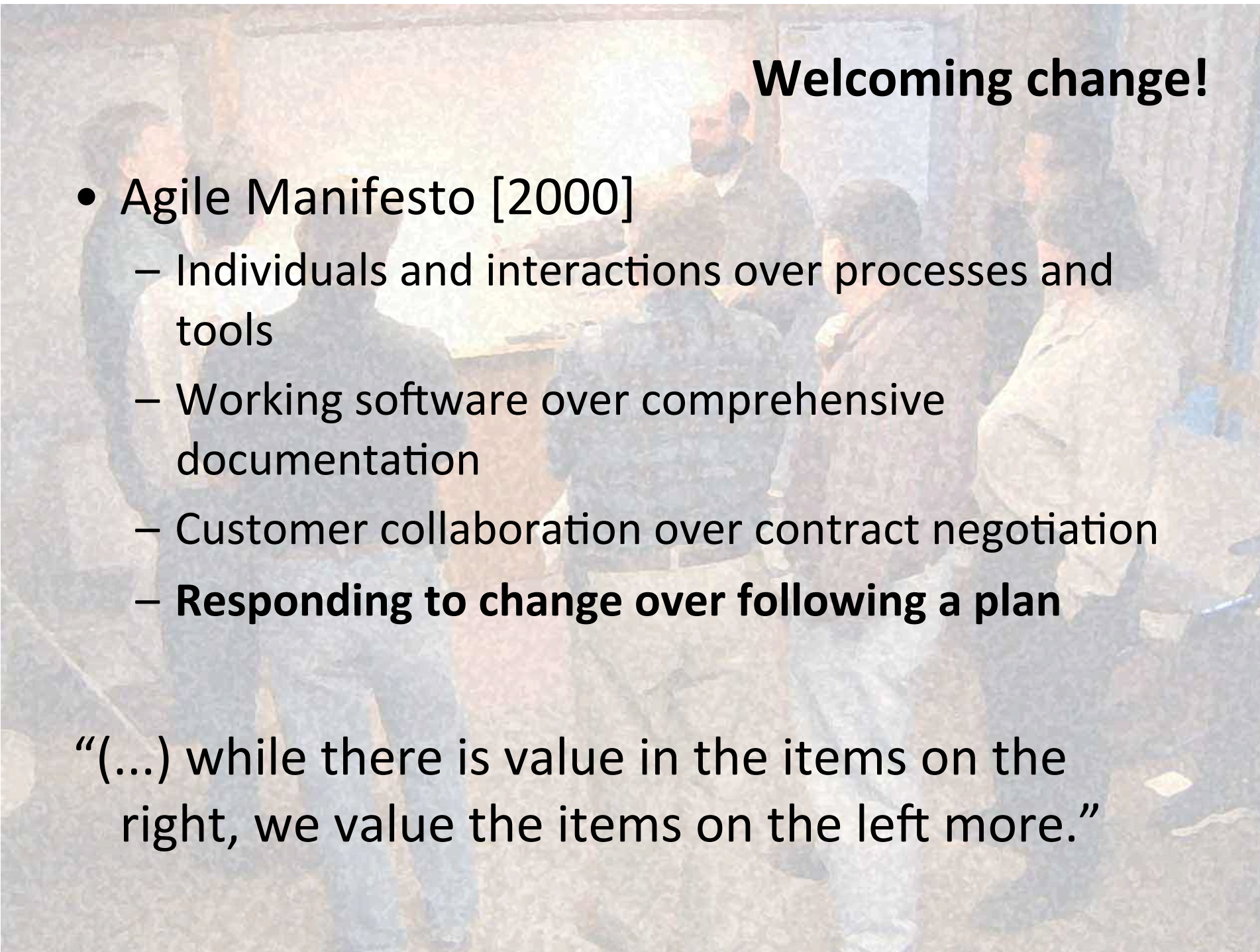
Scrum

Catalysis

FDD

XP

Iconix



Welcoming change!

- Agile Manifesto [2000]
 - Individuals and interactions over processes and tools
 - Working software over comprehensive documentation
 - Customer collaboration over contract negotiation
 - **Responding to change over following a plan**

“(...) while there is value in the items on the right, we value the items on the left more.”

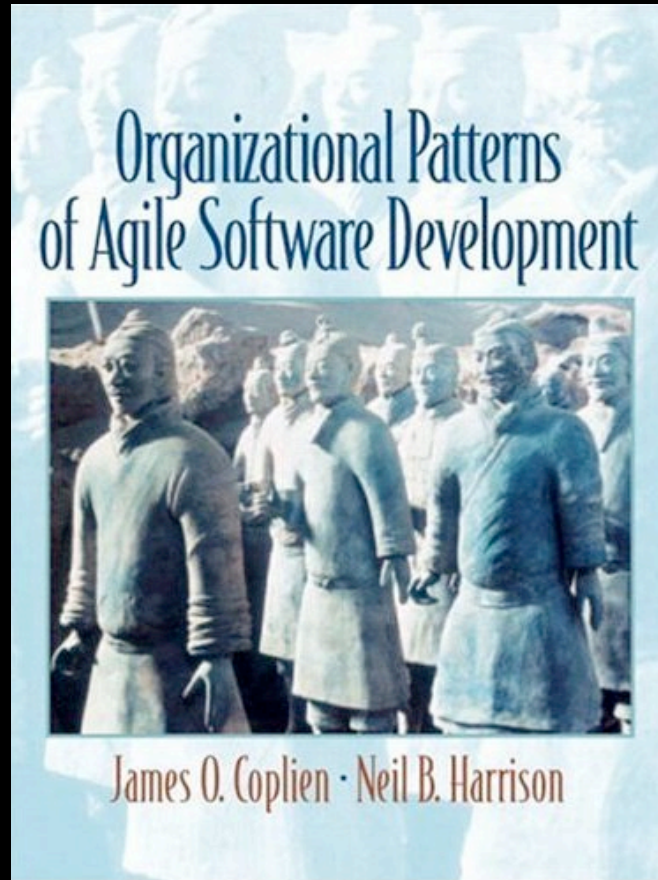
Balancing Discipline and Agility

capabilities, communication, knowledge, discipline, self-organization, adaptability, optimization, pace, quality, ROI, predictability, culture, criticality, size, dynamism...

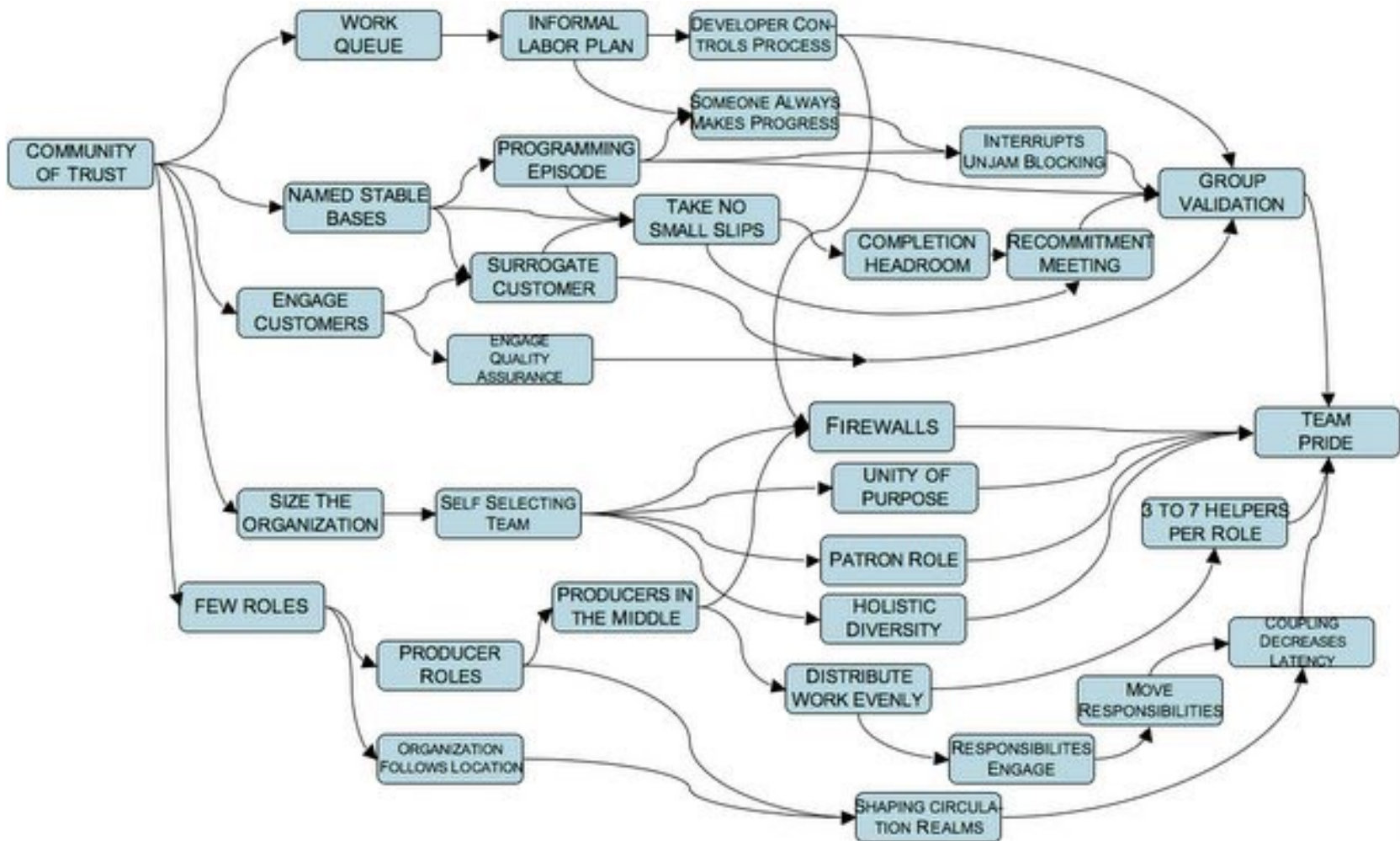


practices, documentation, formalities, leadership, roles, artifacts, tools, training, planning, feedback, size the project...

Organizational Patterns



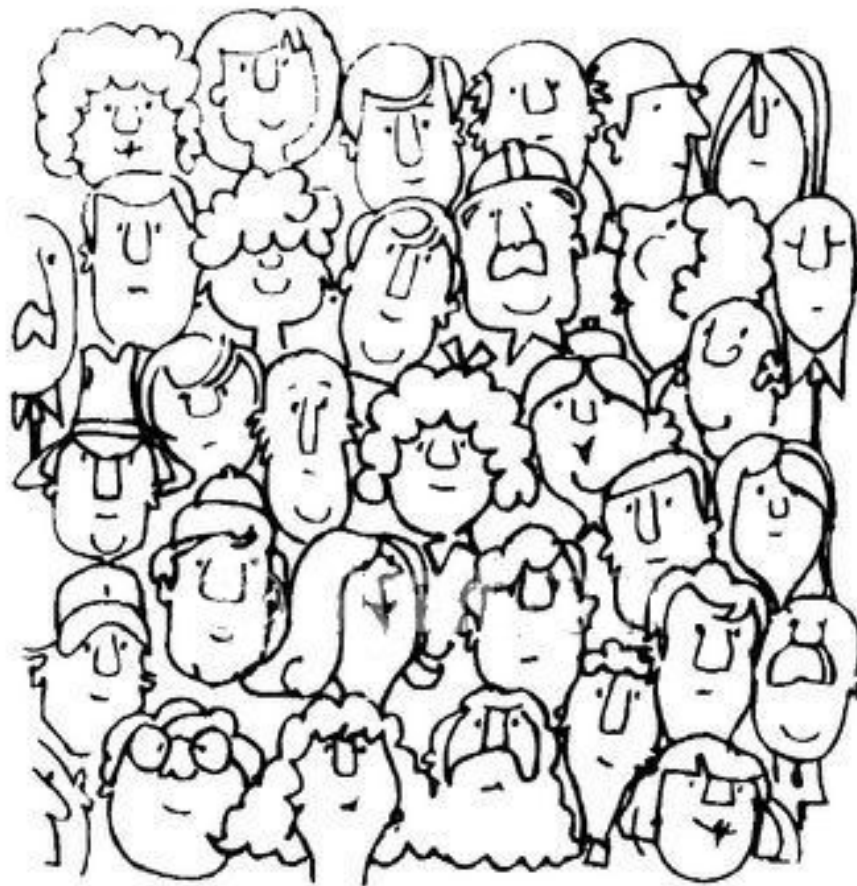
Scrum as OrgPatterns





Patterns, Wikis, Agility:

which common factors you see?

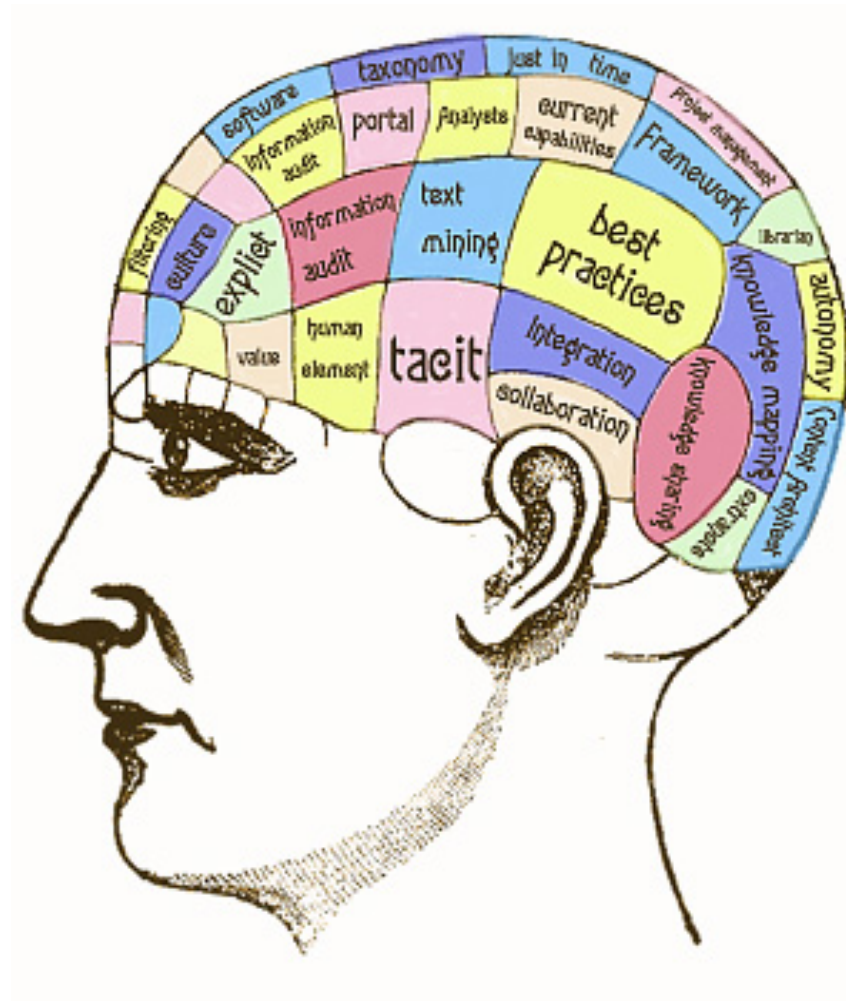


People





Collaboration & Teamwork



Knowledge management



Collective knowledge

A black and white illustration of a hand-drawn pen writing the words "Thank you" in a cursive script on a white background. The pen is positioned at the end of the word "you", with its tip touching the paper. The background is a light gray gradient.

Thank you

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