



Open source, private source: foundations

An excerpt from a forthcoming dissertation titled:

“Open source with private source: coevolving architectures, styles and subworlds in business”

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Agenda

- 1. Introduction and outline to the research

- 2. Foundations:
open source and private source

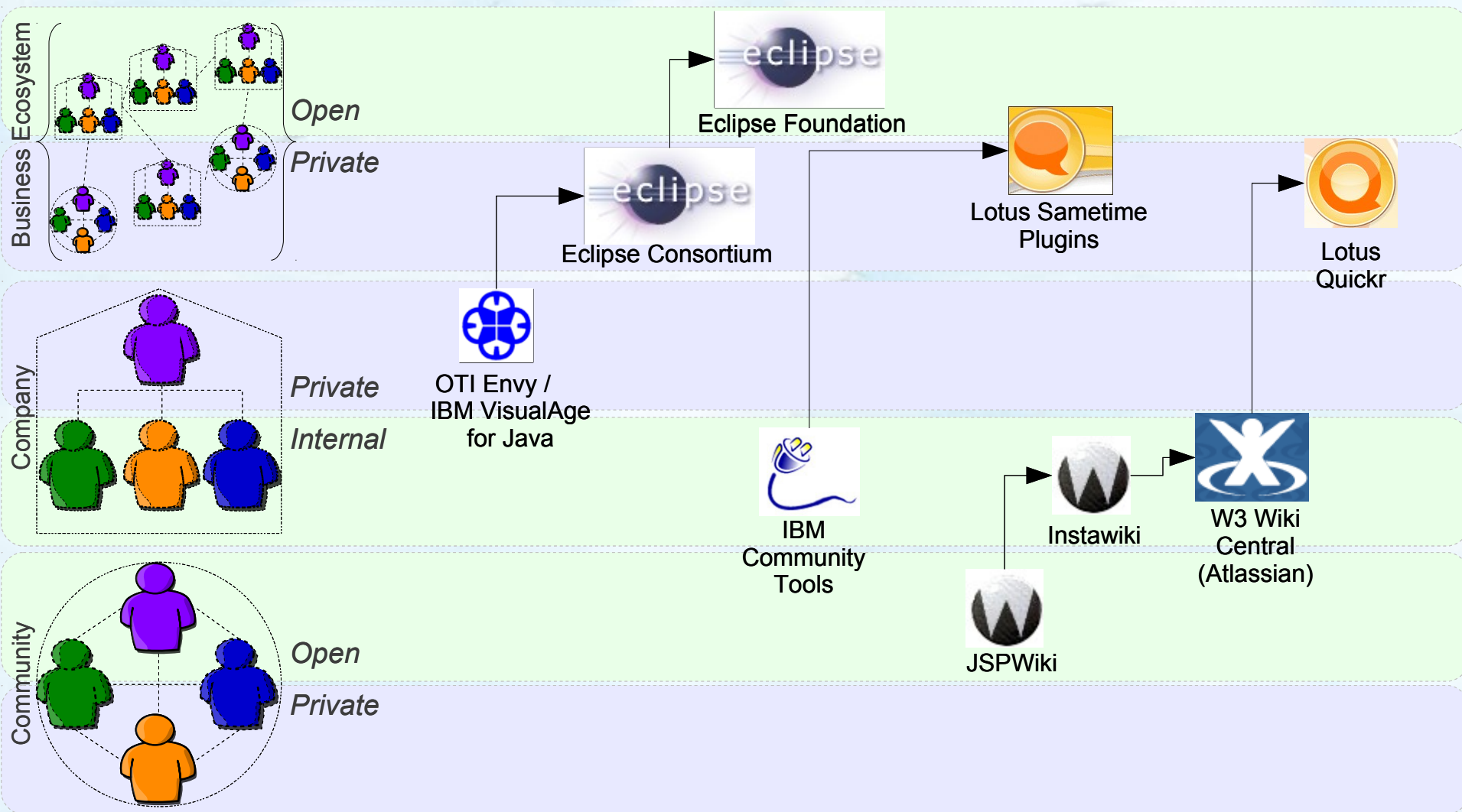
- ... *In progress (excluded here):*
open source WITH private source

Chapters in progress

3. research approach (inductive, multiparadigm inquiry)
4. the nine case studies
5. the historical context of business and technology
6. descriptive patterns in architecture – as originality, offerings, and paths
7. descriptive patterns in styles – as predispositions, engagement and reproduction; and
8. normative patterns in subworlds (commercial / non-commercial), history-making and development
9. findings, options for researchers, considerations for practitioners

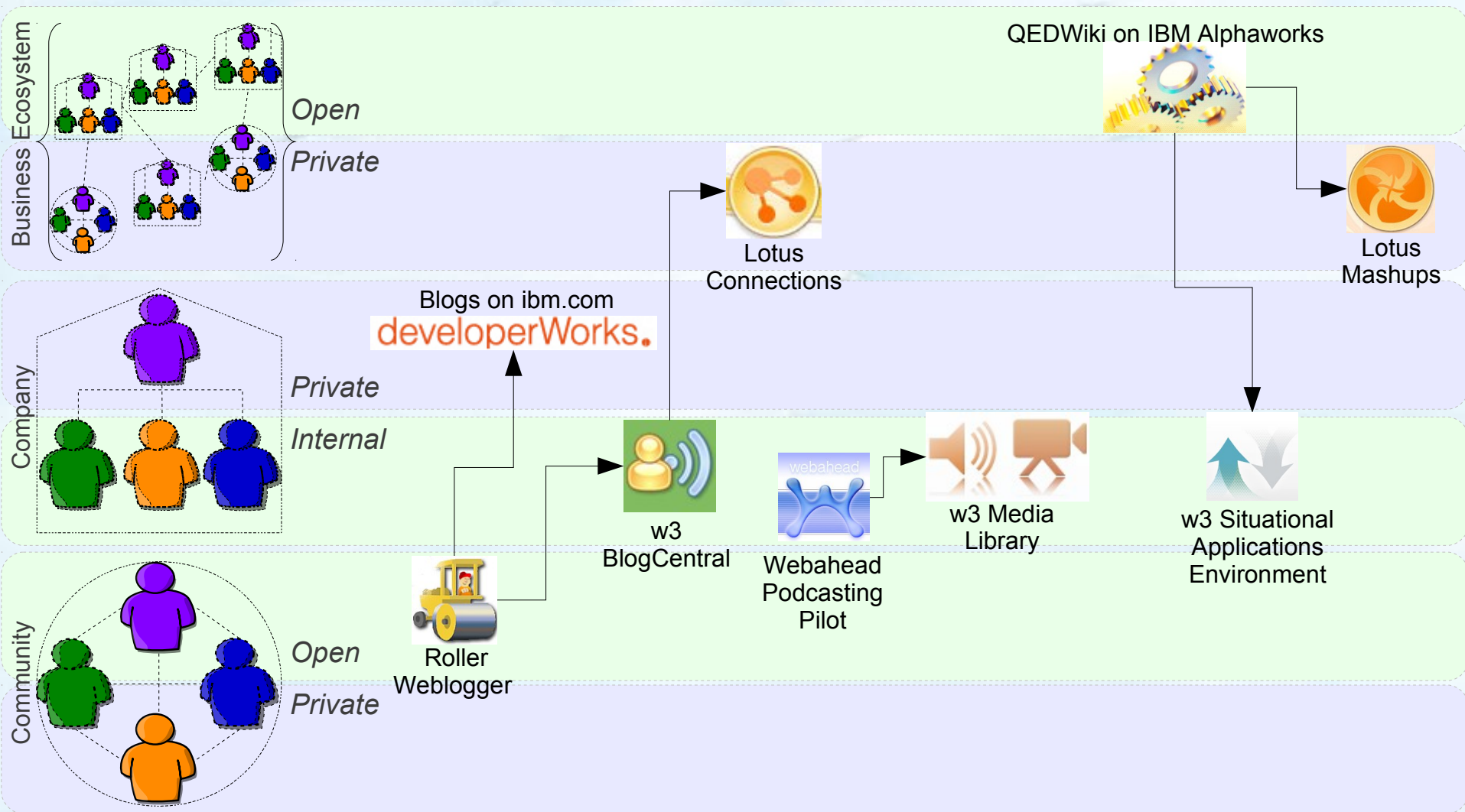
Technology Trajectories (page 1 of 3) ...

(1) Development workbench; (2) IM Broadcast; (3) Wikis;



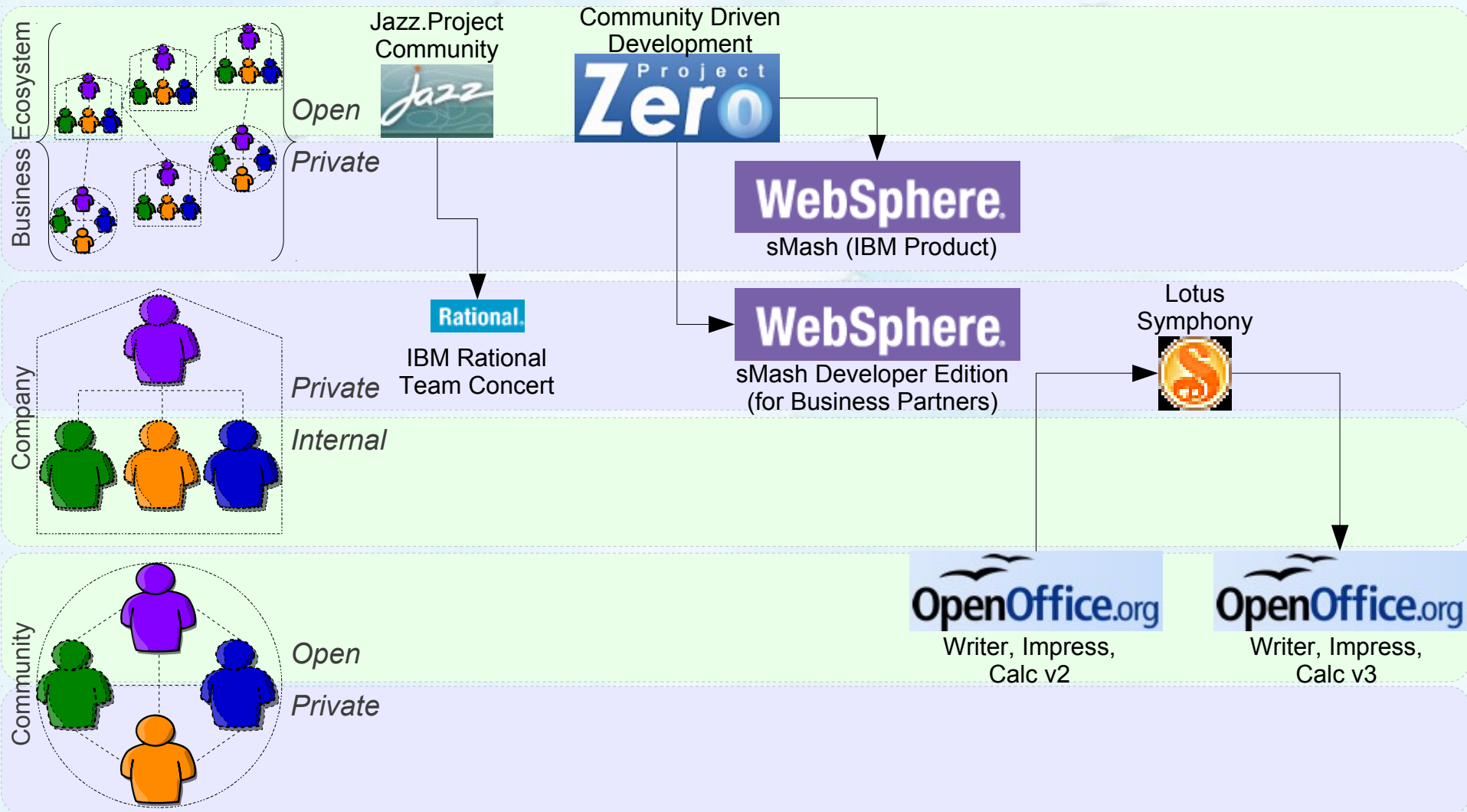
Technology Trajectories (page 2 of 3) ...

(4) Blogs; (5) Digital media sharing; (6) Situational mashups;



Technology Trajectories (page 3 of 3) ...

(7) Appl lifecycle mgmt; (8) Agile web; (9) Office productivity.



1. Introduction and outline to the research

→ Preliminary definitions

1.1 Question

1.1.1 Phenomenon

1.1.2 Impact

1.1.3 Inquiry

1.2 Conclusion

Open source is associated with visibility to system internals, whereas *open interfaces* are associated with external protocols

A system with *open interfaces* has public protocols on its boundaries that enable external systems to interoperate, producing functions emergent in the containing system of systems.



A system with *private interfaces* has privileged protocols, whereby some external systems will have had access and functionality disclosed and authorized selectively.

A system with *open source* discloses its internals to external parties, enabling a potential for dialogue and/or collaboration on the modification of its behaviour in some future version or release.



A system with *private source* reserves the visibility of its internals with a privileged group, thereby retaining responsibility and authority for maintaining and enhancing behavioural integrity for the containing systems of systems.

Open source does not necessarily connote *open interfaces*, and *private source* does not necessarily connote *private interfaces*

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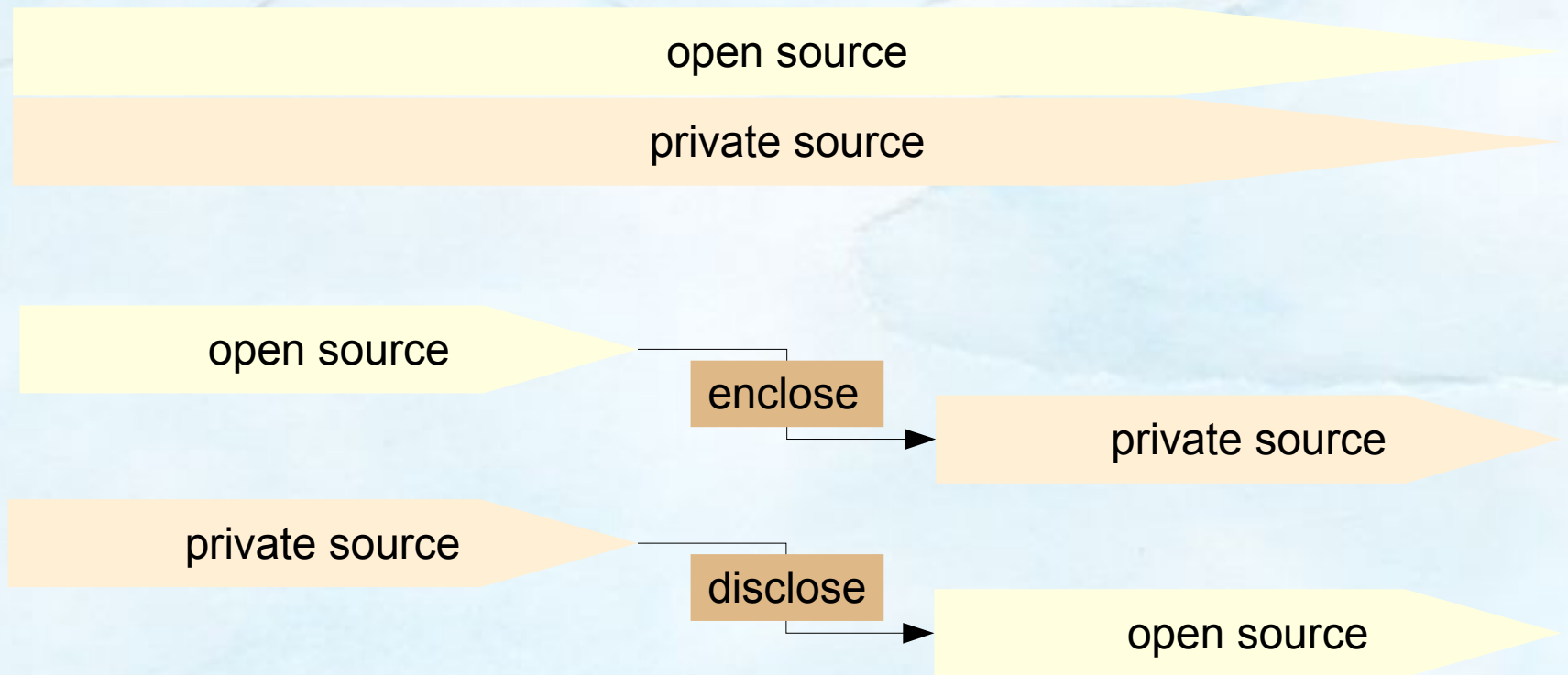
A system with *private interfaces* has privileged protocols, whereby some external systems will have had access and functionality disclosed and authorized selectively.

A system with *open source* discloses its internals to external parties, enabling a potential for dialogue and/or collaboration on the modification of its behaviour in some future version or release.



A system with *private source* reserves the visibility of its internals with a privileged group, thereby retaining responsibility and authority for maintaining and enhancing behavioural integrity for the containing systems of systems.

A business enterprise can simultaneously operate with both open source and private source behaviours



1.1 Question: How do open source and private source coexist and coevolve as patterns of behaviour in business?

- 1.1.1 Phenomenon: Since 2001, open source contributions by corporations has increased at the same time that open source is being embedded into private commercial offerings
- 1.1.2 Impact: Pioneering companies have shaped organizational, industry and social contexts to make open source viable for private commercial businesses
- 1.1.3 Inquiry: What can we infer from IBM's learning on open source with private source that may be applicable in other situations, or for other organizations?

1.1.1 Phenomenon: Since 2001, open source contributions by corporations has increased at the same time that open source is being embedded into private commercial offerings

- (a) Lines of code
- (b) Business models
 - (i) Pure open source (i.e. services, support)
 - (ii) Hybrid open source/commercial licensing, as
 - dual licensing; or
 - open core
 - (iii) Embedded open source

1.1.2 Impact: Pioneering companies have shaped organizational, industry and social contexts to make open source viable for private commercial businesses

- Eclipse Foundation
- Linux Foundation
- Patent Commons (Novell, Philips, Red Hat and Sony, 2005)
- Open Innovation Network (IBM, Novell, Philips, Red Hat and Sony, 2007)
- Eco-Patent Commons (IBM, Nokia, Pitney Bowes and Sony, 2008)

1.1.3 Inquiry: What can we infer from IBM's learning on open source with private source that may be applicable in other situations, or for other organizations?

- In the decade after 2000, IBM has generally been regarded as a successful company.
- At 2009, it declared “Since the dot-com crash of 2002, we have added \$12 billion to IBM's pre-tax profit base, increased our pre-tax margin 2.5 times, quadrupled our earnings per share and more than doubled our free cash flow” (IBM 2009, 3).
- As a reflection, the company has stated that “A decade ago, we saw change coming. [...] A new computing architecture was taking shape. It was build on pervasive instrumentation and interconnectivity, open standards, unprecedented computing power and advanced analytics” (IBM 2009, 10). Part of open standards has been participation in the open source movement.

2. Foundations: open source and private source

- 2.1 Open source and private source, in the context of (business) systems
 - 2.1.1 Open source as a label, beyond software code
 - 2.1.2 Private source as a privilege, with information hiding
 - 2.1.3 Open source that acknowledges interoperability with private source

2.1.1 Open source, as a label originating 1998, has meaning beyond software code

- 2.1.1.1 “Open source” was inspired by “The Cathedral and the Bazaar”, at the open release of Netscape Communicator source code
- 2.1.1.2 The variety of licensing conditions details options available to authors and (re-)distributors

2.1.2 Private source reserves a privilege through information hiding in a modular system design

- 2.1.2.1 Private source, in opposition to open source, is an under-appreciated label
- 2.1.2.2 Open source and private source can interoperate through interface specifications, even when internals are hidden
- 2.1.2.3 Private source can simplify development, in the absence of industry-accepted standards

2.1.3 A definition of open source that acknowledges interoperability with private source encourages contributions from both individual and commercial participants

- 2.1.3.1 Like the free software movement, open source means free as in liberty rather free as in gratis
- 2.1.3.2 The open source movement can and has benefited from contributions by private enterprises
- 2.1.3.3 The open source definition provides a liberty of potential profits for commercial business models
- 2.1.3.4 Simile: Private source is akin to a trade secret; open source is akin to disclosing a standardized recipe

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