



Adopting Open Standards Through Open Innovation

Ian Skerrett

Director of Marketing

Eclipse Foundation

ian.skerrett@eclipse.org

September 12, 2007

Agenda



- Eclipse at a Glance
- Innovation Networks
- How Does it Work?
- Examples of Eclipse Innovation Networks in Action
- Futures and Conclusions

The Members of Eclipse

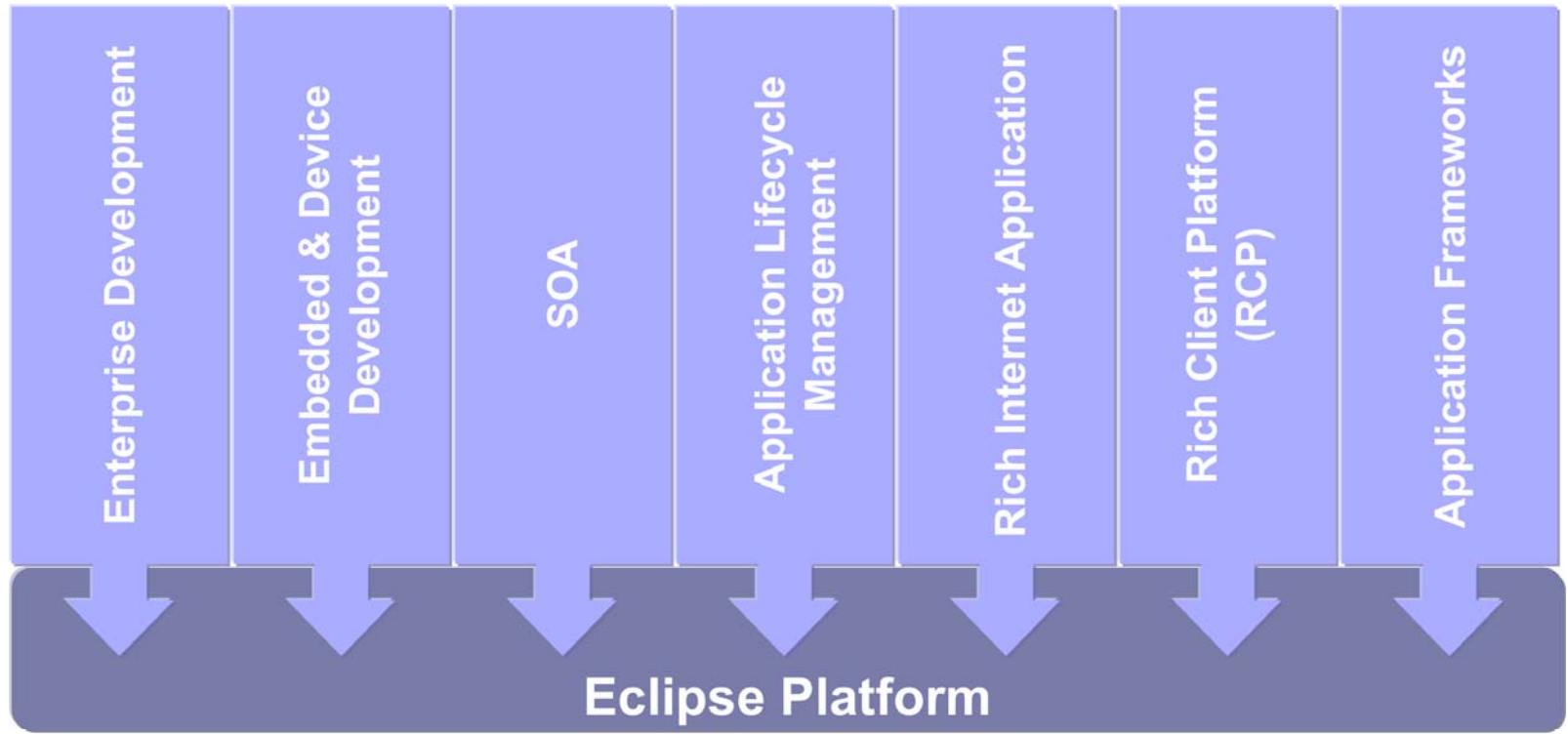


- 160 members (130 in March 2006)
 - 21 Strategic Members (16 in June 2006)
- 888 committers, representing 50+ organizations

Strategic Members



What Is Eclipse?



NASA – Mars Rover Command and Control



The screenshot displays the Maestro software interface, which is used for Mars rover command and control. The main window shows a grayscale map of the Mars surface with a green path and numerous yellow markers labeled "Site: 1" through "Site: 34". A blue box highlights a specific area on the map. To the right, there is a "Product ID" table with columns for Product ID, Instrument, Sol, and Seq. Below the table is an "Image View" window showing a close-up of the rover's front camera view.

Product ID	Instrument	Sol	Seq ...
2F134356767EFF2600P1212L0M1	FRONT_HAZCAM_LEFT	90	p1212
2F134449644EFF2700P1212L0M1	FRONT_HAZCAM_LEFT	91	p1212
2F134614069EFF2700P1403L0M1	FRONT_HAZCAM_LEFT	93	p1403
2F134615161EDN2700P1131L0M1	FRONT_HAZCAM_LEFT	93	p1131
2F135147950EDN2700P1131L0M1	FRONT_HAZCAM_LEFT	99	p1131
2F135140174ESF2700P1127L0M1	FRONT_HAZCAM_LEFT	99	p1127
2F135149189EDN2700P1141L0M1	FRONT_HAZCAM_LEFT	99	p1141
2F135149794EDN2700P1141L0M1	FRONT_HAZCAM_LEFT	99	p1141
2F135150300EDN2700P1141L0M1	FRONT_HAZCAM_LEFT	99	p1141
2F135150997EDN2700P1141L0M1	FRONT_HAZCAM_LEFT	99	p1141
2F135151610EDN2700P1141L0M1	FRONT_HAZCAM_LEFT	99	p1141
2F135152416EDN2700P1141L0M1	FRONT_HAZCAM_LEFT	99	p1141
2F135155009EFF2700P1212L0M1	FRONT_HAZCAM_LEFT	99	p1212
2F135153765EDN2700P1111L0M1	FRONT_HAZCAM_LEFT	99	p1111

JP Morgan – Bond trading application



DateTime	Algorithm	Strang...	Tim...	CutOff...	Price...	BidRate	Offer...	MyAlgor...	MyStr...	My...	MyCut...	MyPri...	MyBid...	MyOff...
09-Jun-06...	Sabr	Broker	Linear	15:00 (...	Bid	114	114.03	Kennetron	Broker	Linear	15:00 ...	Bid	114.12	114.15

As...	NU...	Publish Type	LastGoodReqDate	LastGoodFinishDate	LastGoodUserName	LastReqDate	LastReqUserName	Status
USD	JPY	speeds	08-Jun-06 15:58:57	08-Jun-06 15:58:57	u160432			OK
USD	JPY	volSurface	08-Jun-06 16:35:11	08-Jun-06 16:35:27	u160432			OK

T	Date	A	S/F	Rr25	Rr10	St25	St10	C10	C25	Atm	P25	St25
1D	12-Jun-06 [3]	<input type="checkbox"/>	S	-0.15	-0.29	0.12	0.43	6.32	6.07	6.03	6.25	0.15
1W	16-Jun-06 [7]	<input checked="" type="checkbox"/>	S	-1.25	-2.70	0.15	0.54	8.81	9.14	9.62	10.40	11.51
2W	23-Jun-06 [14]	<input type="checkbox"/>	S	-0.36	-0.70	0.21	0.77	9.81	9.41	9.39	9.78	10.51
3W	30-Jun-06 [21]	<input type="checkbox"/>	S	-0.48	-0.93	0.21	0.79	9.63	9.28	9.31	9.76	10.56
1M	11-Jul-06 [32]	<input checked="" type="checkbox"/>	S	-1.00	-1.89	0.15	0.54	8.68	8.73	9.08	9.73	10.57
2M	10-Aug-06 [62]	<input type="checkbox"/>	S	-0.79	-1.55	0.27	1.02	9.35	8.97	9.10	9.77	10.90
3M	11-Sep-06 [94]	<input type="checkbox"/>	S	-0.91	-1.78	0.30	1.18	9.25	8.81	8.96	9.72	11.03
6M	11-Dec-06 [185]	<input type="checkbox"/>	S	-1.23	-2.44	0.37	1.50	9.23	8.71	8.95	9.93	11.68
9M	09-Mar-07 [273]	<input type="checkbox"/>	S	-1.51	-3.04	0.40	1.70	9.09	8.56	8.92	10.07	12.14

- Rename Column
- Insert new CcyPairPublishDataObject
- Publish volSurface (USD, JPY)**
- Delete CcyPairPublishDataObject (USD, JPY)





SocialPhysics.org



Discovery Machine Inc.
Accelerating Innovation



FUJITSU



INN00PRACT



symbian



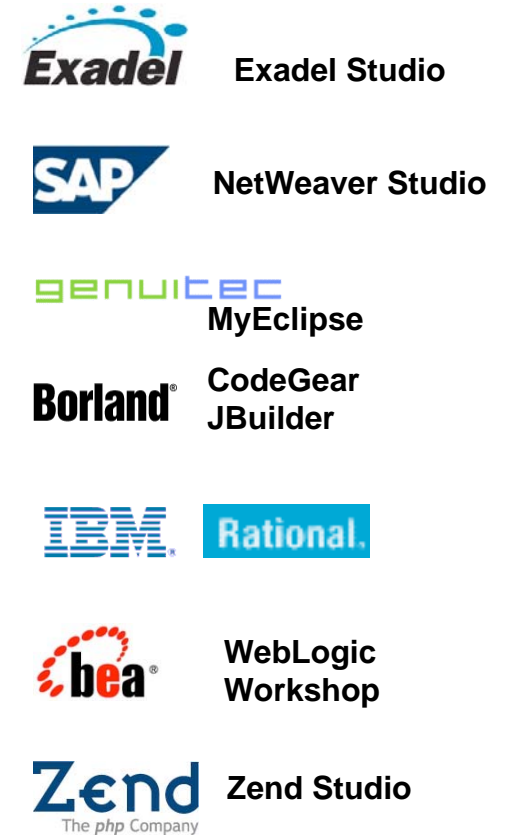
WIND RIVER



WIND RIVER



Innovation Networks in Action: Web Tools Platform Project

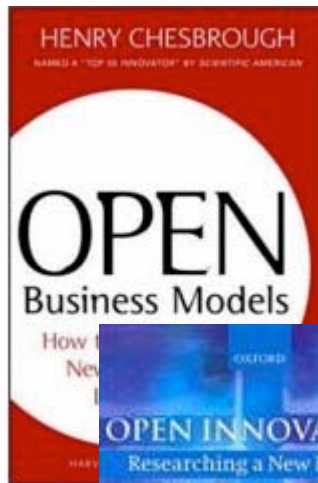


Keys to Eclipse's Success



- Eclipse has established the best model for multiple organizations to collaborate on the development of **product-ready** open source software
- Eclipse has a proven track record of helping organizations get started with open source, and assisting their migration to the next level of open source maturity
- This really is the best of both worlds:
 - The openness, transparency and meritocracy of open source
 - With the resources and commitment of corporations both large and small to produce product-ready technology

Open Innovation



*Open Innovation is a paradigm that assumes that firms can and should use external ideas as well as well as internal ideas.... **The Open Innovation paradigm treats R&D as an open system.***

*Open Innovation is sometimes conflated with open source methodologies for software development... While open source shares the focus on value creation throughout an industry value chain, **its proponents usually deny or downplay the importance of value capture.***

from Open Innovation: Researching a New Paradigm

A Concrete Example



IBM has built what it calls an "open ecosystem" of chip R&D with nine partners, including Advanced Micro Devices, Sony, Toshiba, Freescale Semiconductor, and Albany Nanotech, a university research center.

Source: BusinessWeek, August 30, 2007

http://www.businessweek.com/innovate/content/aug2007/id20070830_258824.htm

Eclipse: an open source community



“Eclipse is an **open source community** focused on developing a **universal platform** of frameworks and **exemplary tools** that make it easy and cost-effective to build and deploy software in today’s connected and unconnected world.”

The Eclipse community is focused on value creation by creating an innovation network --- a vendor-neutral and openly governed community for collaboration and joint software development

Eclipse: a profitable eco-system



“Eclipse is a **consortium** of major software vendors, solution providers, corporations, educational and research institutions and individuals working together to create an **eco-system** that enhances, promotes and cultivates the Eclipse open platform with complementary products, services and capabilities.”

The Eclipse community embraces the importance of value capture. We are consciously focused on building a commercially profitable ecosystem

How Does It Work?



- Focus on value
- Culture of Participation
- Execution on Platform Values

How Does It Work?



- Focus on value
- Culture of Participation
- Execution on Platform Values

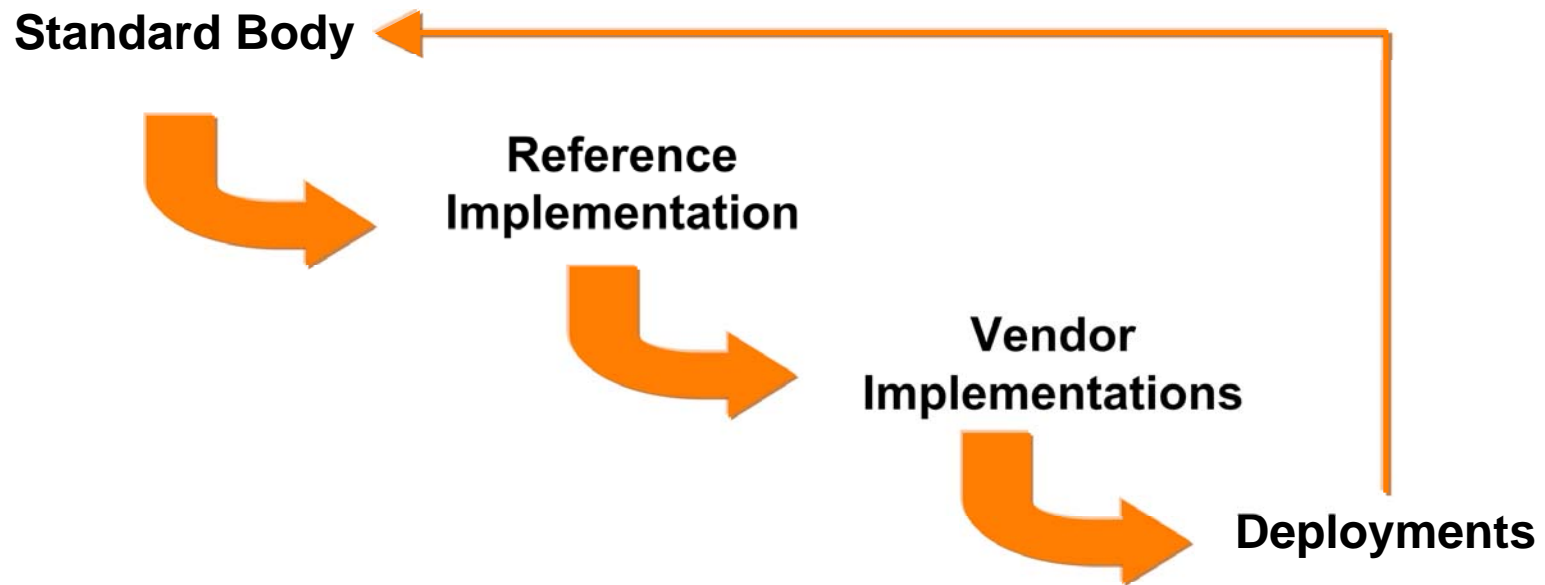
The Software Development Model is Broken



- Software development cost structures today have no correlation to creating value for customers.
- 80% of new costs and maintenance costs go to build and support infrastructure for which companies derive zero differentiating product value.



The Standards Cycle



Too Much Time!

The Development Model for Open Source



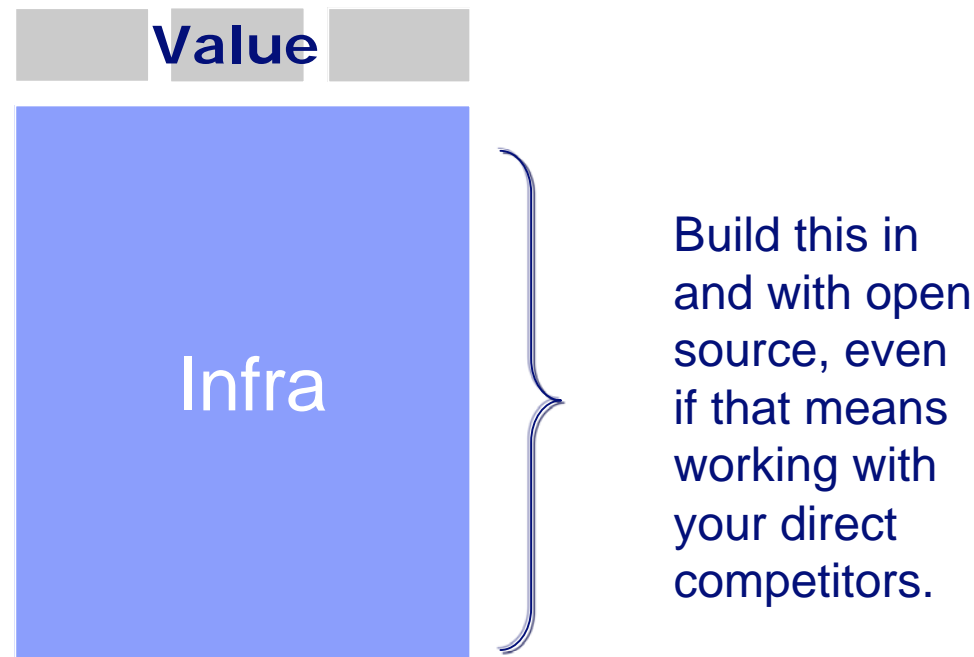
- Shared implementations of infrastructure
 - Speed to market
 - Increase rate of standards adoption
 - Increase rate of interoperability
 - Reduce risk
 - Provide thought leadership and first mover advantages

- Vendors still compete!
 - Product differentiating features
 - Service, support
 - Branding, channels

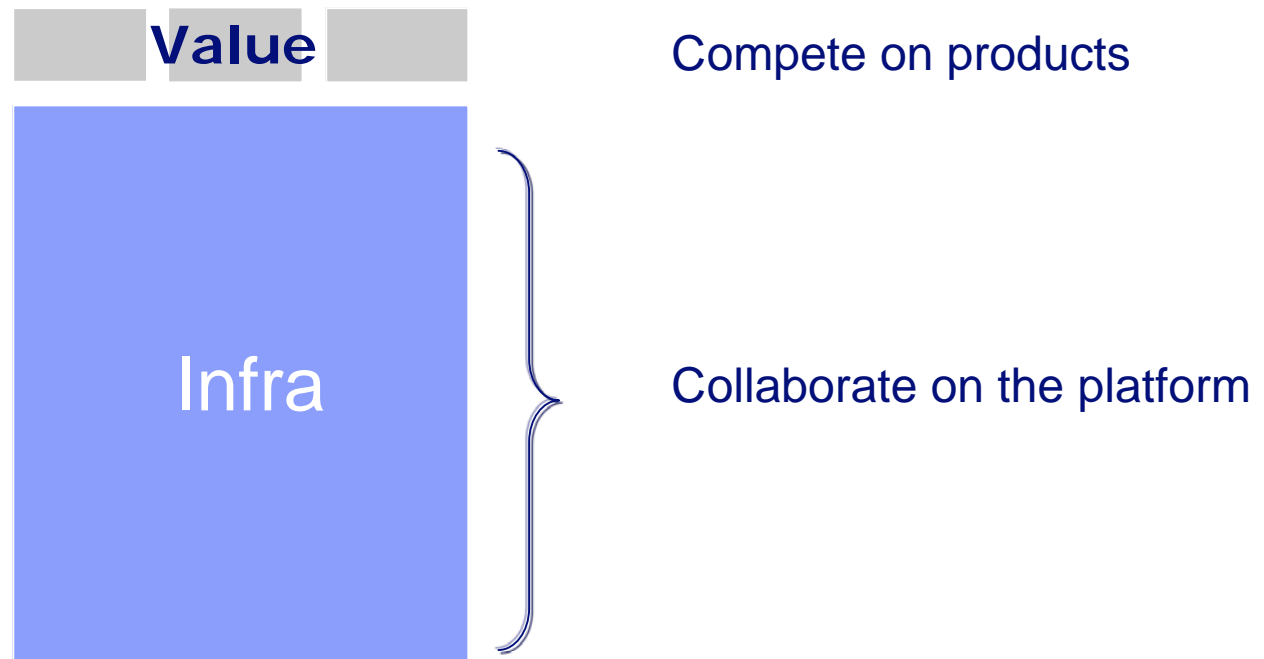
Compete On What Matters



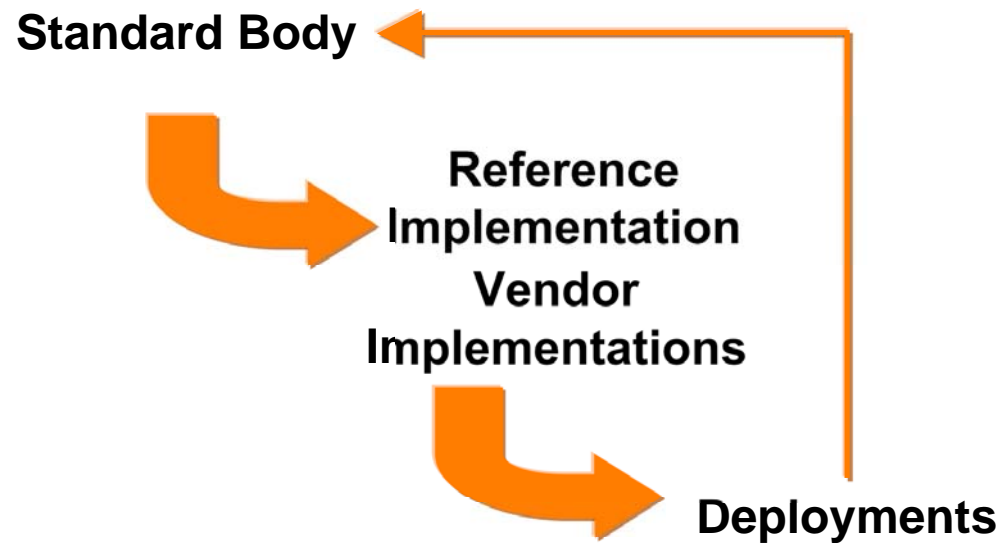
- Define very precisely what your competitive differentiators are for your customers or you're going out of business
- Focus all possible energies there, and acquire everything else from OSS, or help build it in OSS



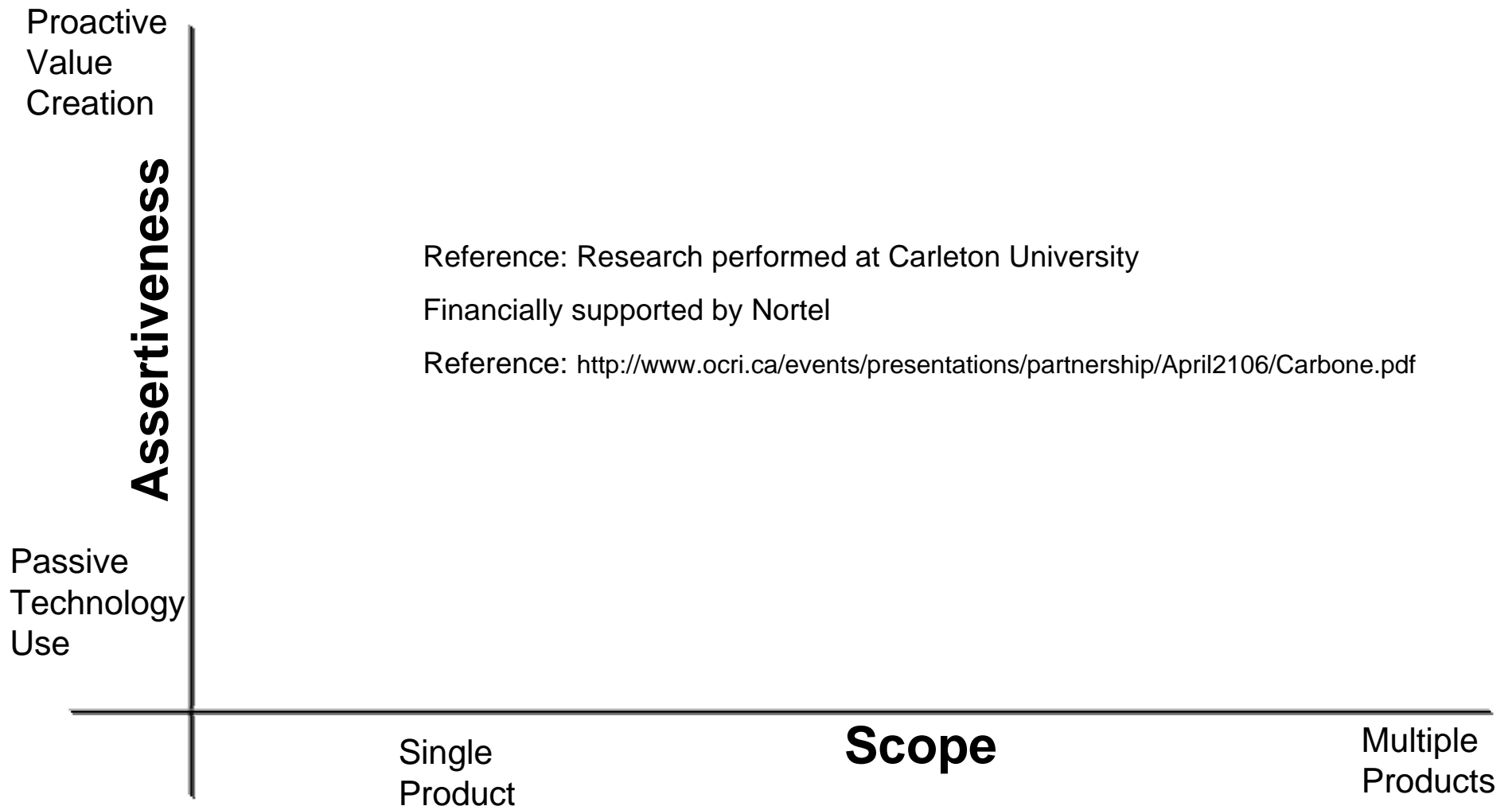
Or in other words...



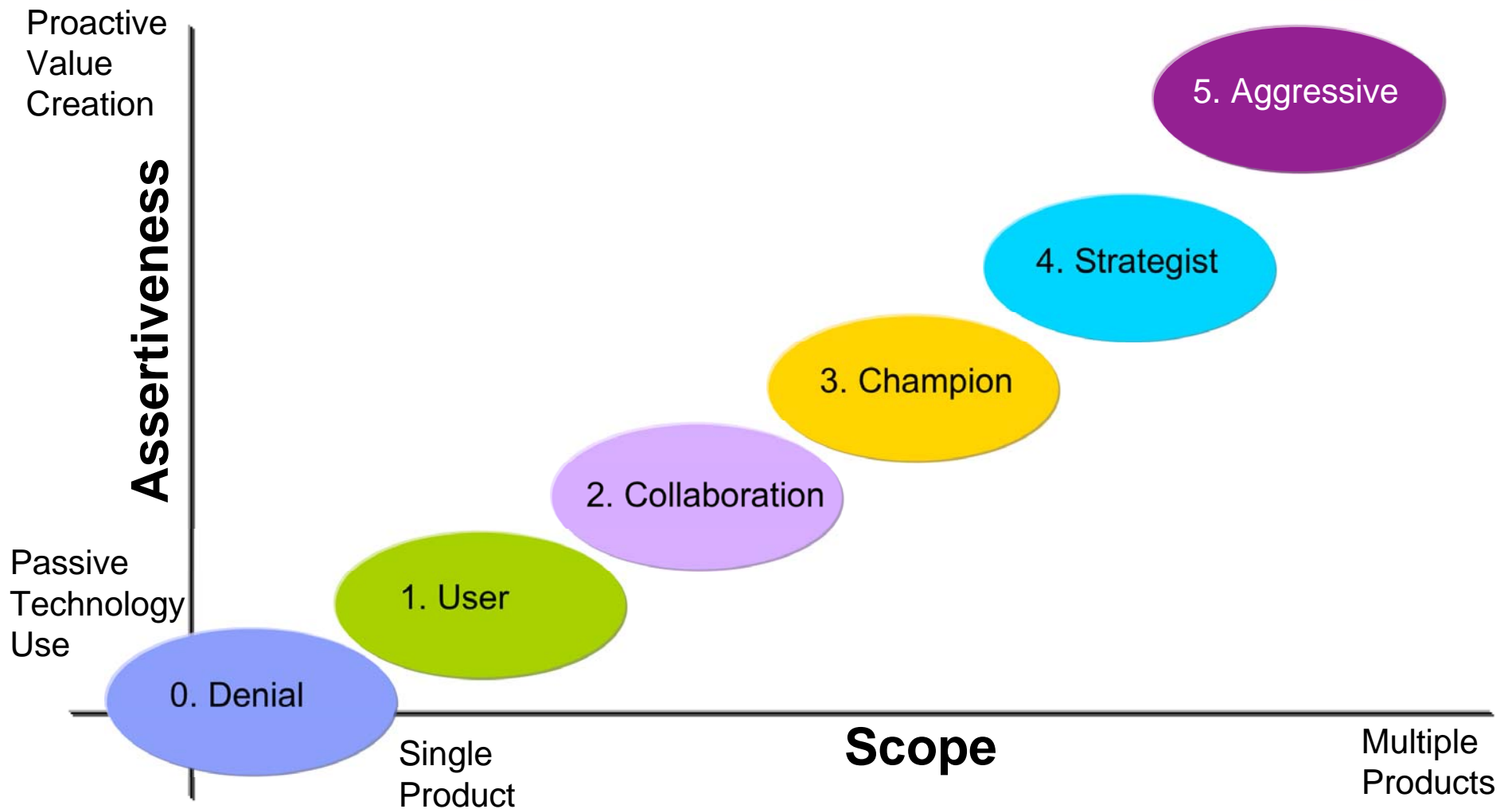
The Standards Cycle



Open Source Maturity Model



Open Source Maturity Model

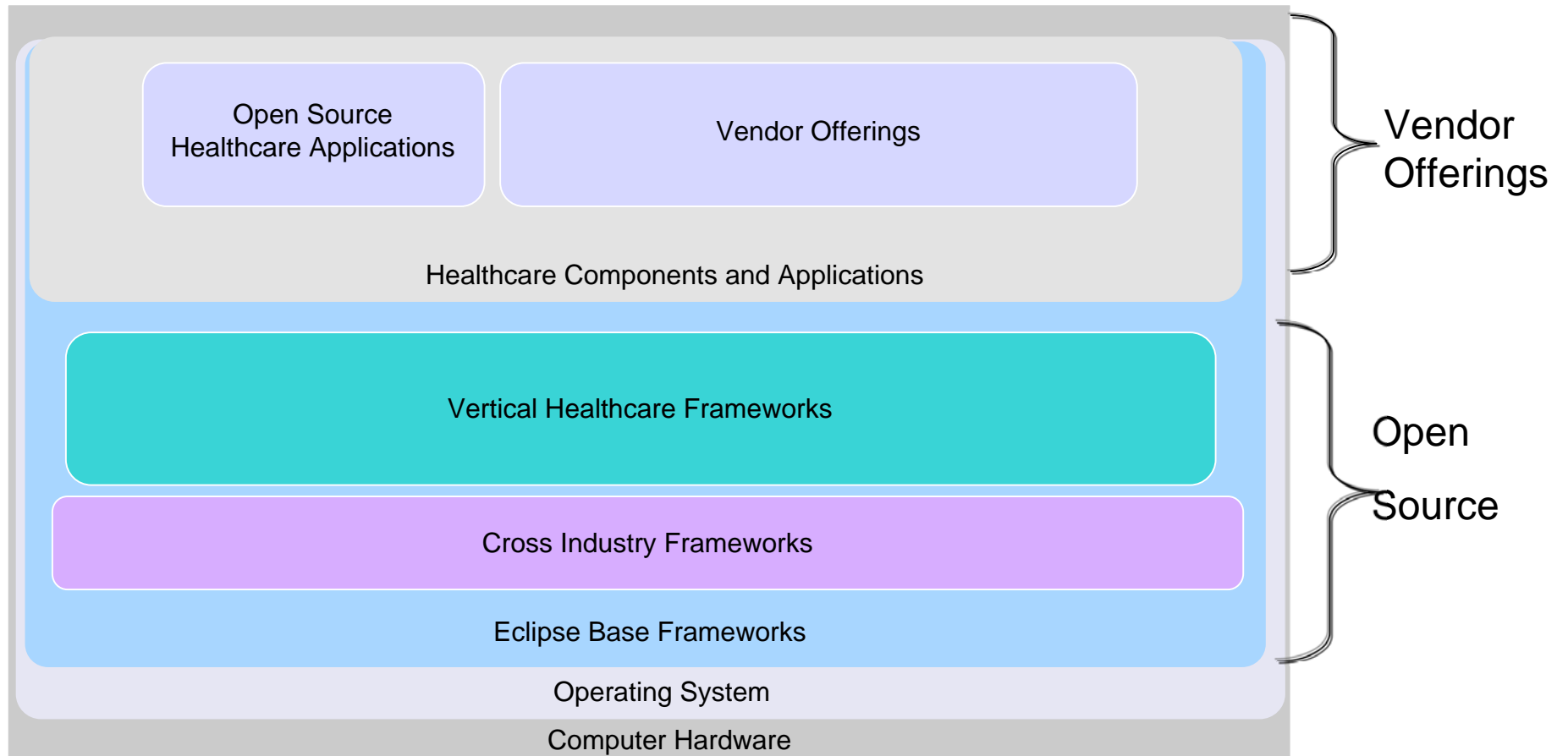


Prediction



- Within the IT industry, ISVs and vendors have been the first to move through this maturity model
- Information Technology sectors within vertical industries are next
 - Healthcare, Automotive, Financial Services, Insurance, Government

Eclipse Open Healthcare Framework Project (OHF)



How Does It Work?



- Focus on value
- Culture of Participation
 - Architecture of Participation
 - Open Development
 - Open Governance
- Execution on Platform Values

Architecture of Participation



 <http://www.flickr.com/photos/sentience/261922677/>



 <http://www.flickr.com/photos/ckindel/135426249/>

*“what really distinguishes open source is not just source, but an **architecture of participation**””*

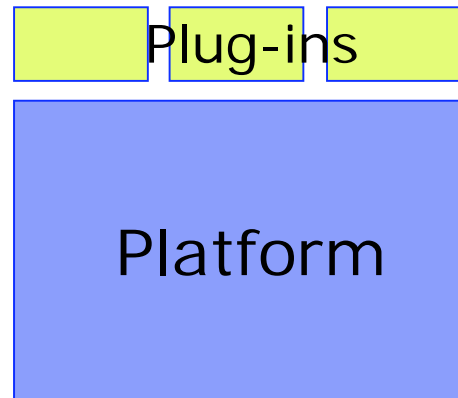
Tim O'Reilly

<http://www.oreillynet.com/pub/wlg/3017?wlg=yes>

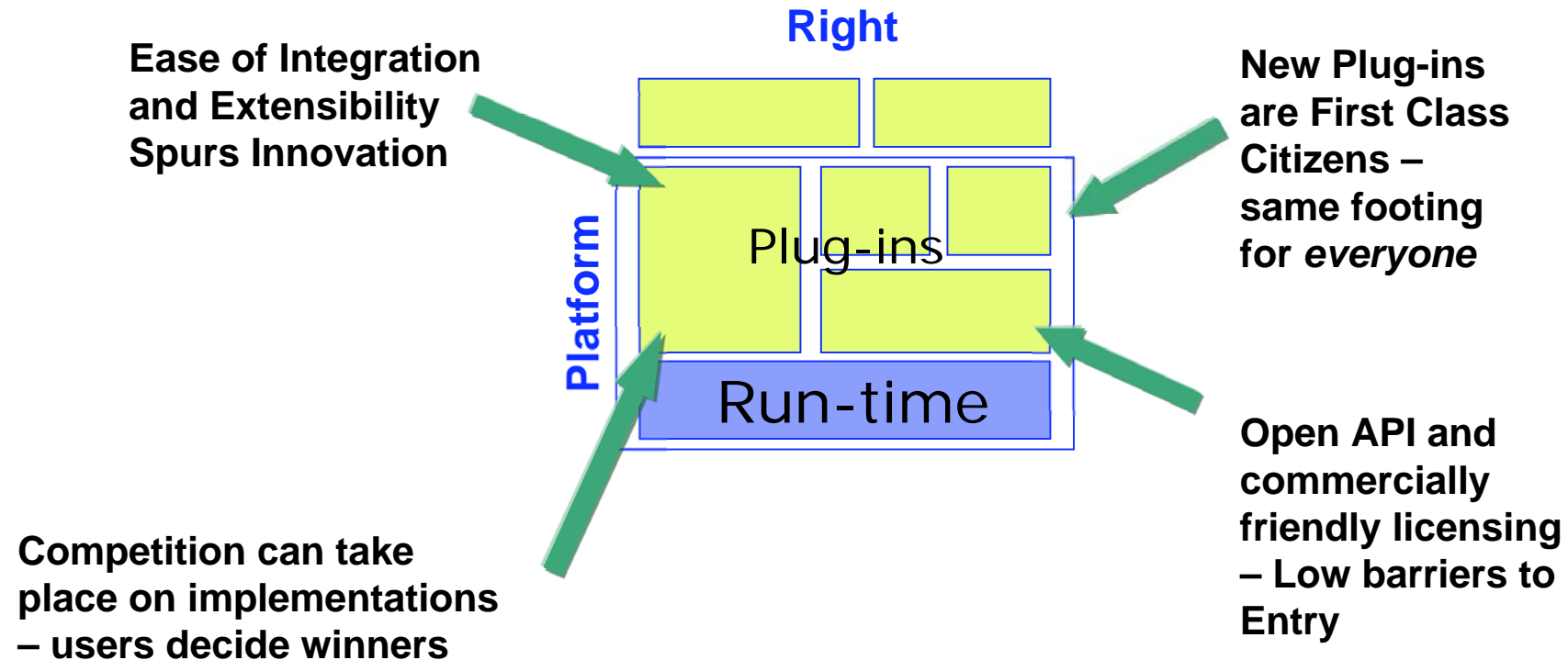
The Eclipse Experience – Architecture of Participation



Wrong!



The Eclipse Experience – Architecture of Participation



Successful Ecosystems are built on this model!

Open Development



- **Open**
 - Anyone can participate, including competitors
 - Same rules and agreements for everyone

- **Transparent**
 - Public mailing lists, project meeting minutes and group discussions
 - Open bug database

- **Meritocracy**
 - Responsibility based on contribution and ability.
 - Leadership roles in Eclipse are also merit-based and earned by peer acclaim.

Open Governance



- **Open source projects make technical decisions**
 - Committers and project leaders remain responsible and autonomous
 - No command and control organization

- **Everyone has an equal vote**
 - No single entity has final control
 - Non-for-profit organization is the legal entity

- **Board of Directors setup policies and strategies for the community**

- **Eclipse Foundation provides professional staff to support the community**

How Does It Work?



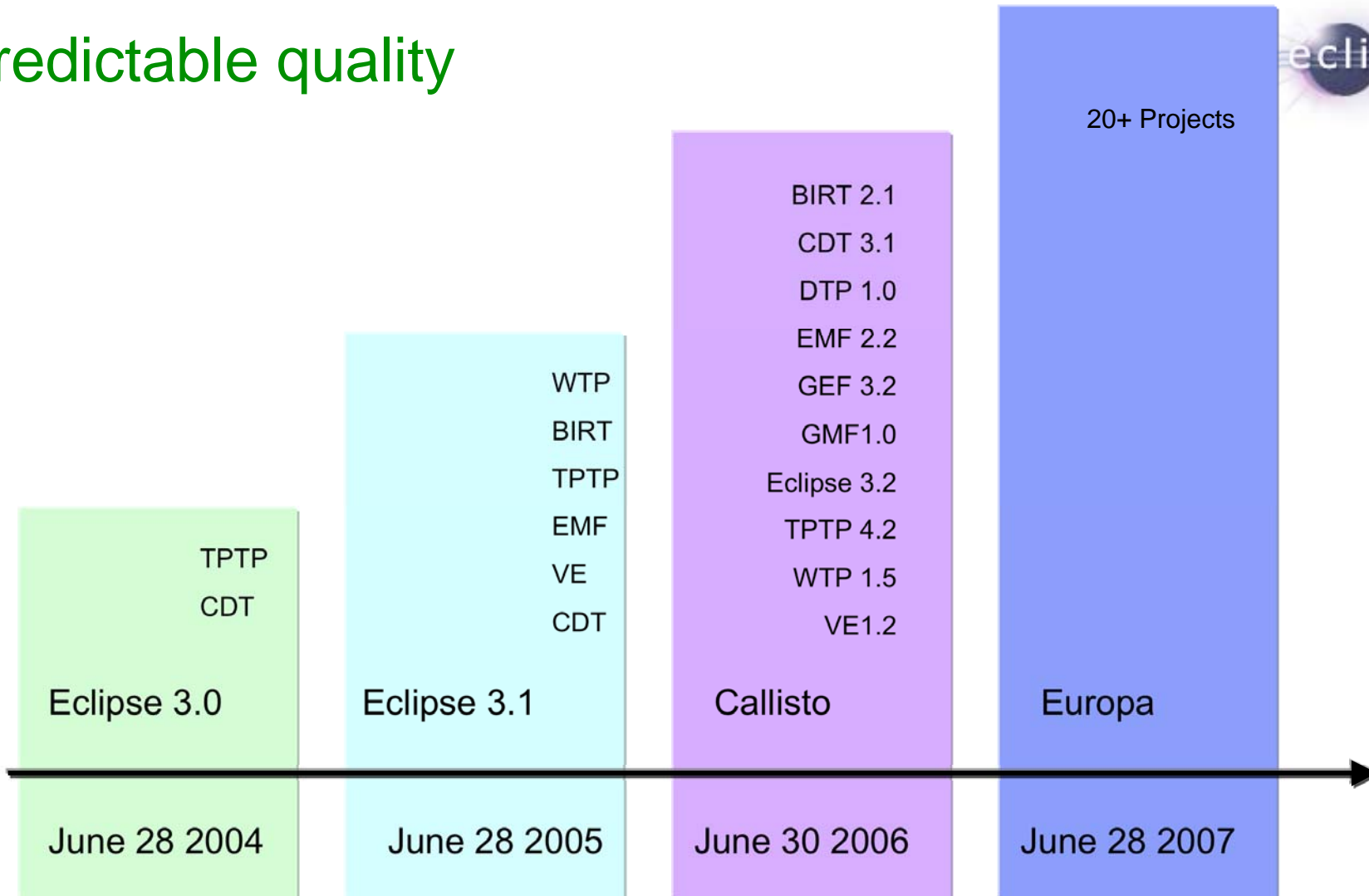
- Focus on value
- Culture of Participation
- Execution on Platform Values

Platform Values



- Architecture
 - Modular & extensible architecture vs monolithic release
 - Focus on quality APIs and frameworks
- Governance
 - Projects remain independent
 - Every participant engages under exactly the same rules
- Process
 - Frequent milestone releases
- Predictability

Predictable quality



Eclipse Europa Snapshot



- Eclipse Release Train for 2007
- By the numbers

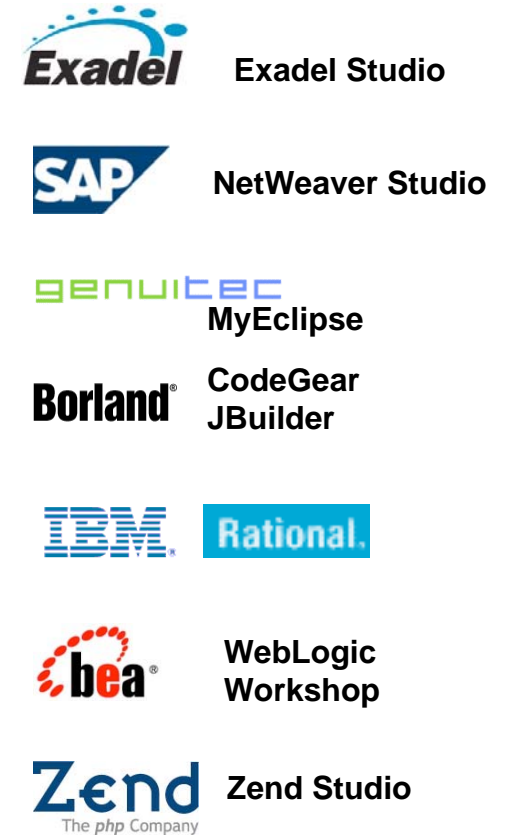
2007	2006
▪ 21 projects	10
▪ 17 million LOC	7 million
▪ 25 organizations	15
▪ 19 countries*	12

Australia, Austria, Brazil, Bulgaria, Canada, China, Czech Republic, France, Germany, Ireland, Israel, Japan, Poland, Russia, Sweden, Switzerland, Turkey, UK, USA

Innovation Networks in Action: C/C++ Development Tools Project



Innovation Networks in Action: Web Tools Platform Project



Conclusions



- Open source is a powerful model for collaborative development
 - Collaborate on infrastructure and open standard implementations
- Eclipse has developed a model for creating innovation networks
 - Architecture of Participation
 - Governance
 - Open Development



Thank You!

ian.skerrett@eclipse.org

September 12, 2007