



Open for Business

Open Standards: a case for adoption

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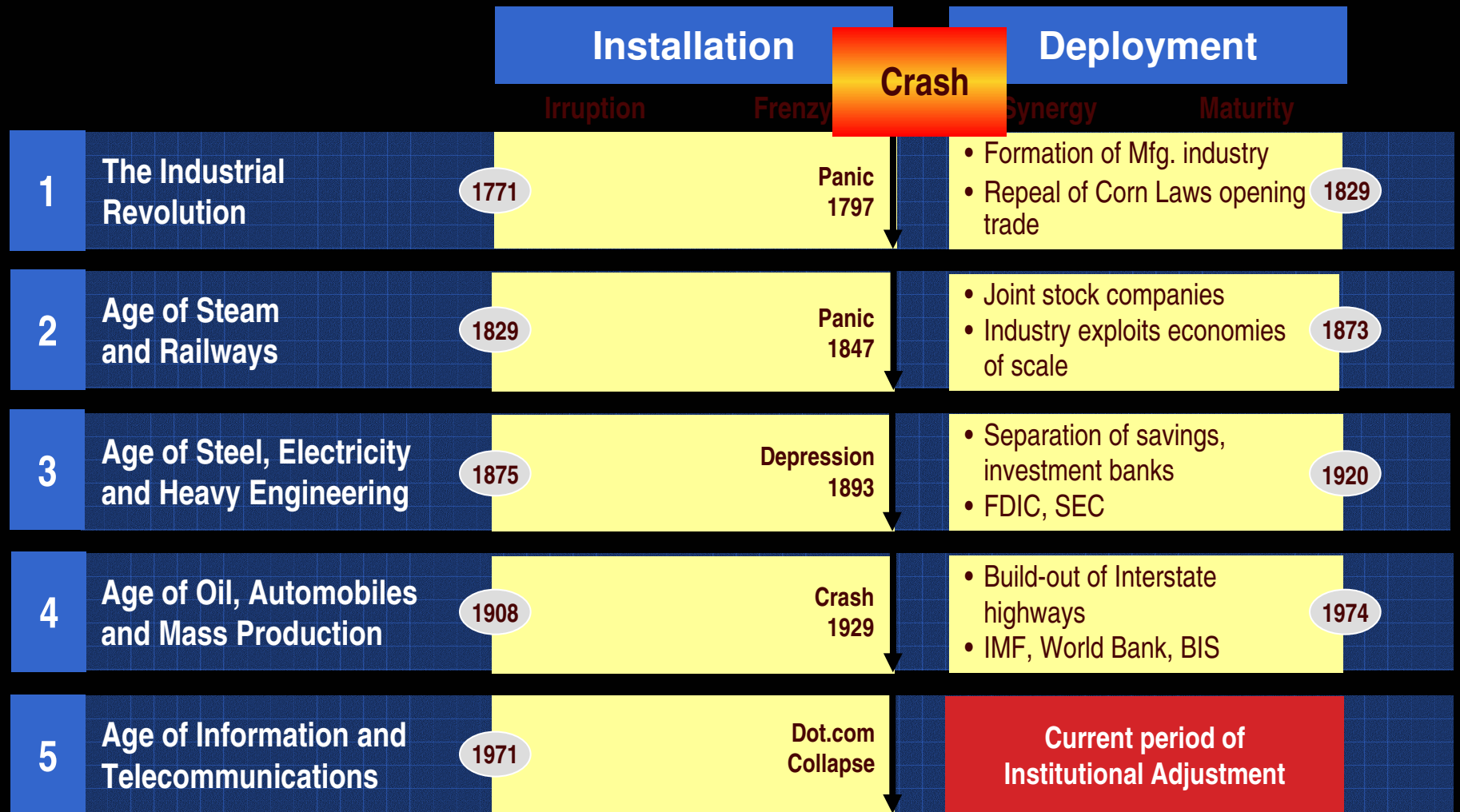


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Agenda

- **Historical Cycles**
- **Standards Characteristics & Evolution**
- **Technology & Industry Standards**
- **Building Standards: International Experience**

Five historical cycles



Source: "Technological Revolutions and Financial Capital, Carlota Perez, 2002

Connecting platforms, standards, and growth

- **Standardization of the rail network enabled industrialized America and Europe**
- **A connecting platform fueling growth, creating new business opportunities**
 - Connecting resources with factory efficiencies
 - Connecting goods with markets
 - Enabling new distribution models (Sears Roebuck)
- **Other technology platforms: electricity grid, national highway systems,the internet**

“Standards contribute more to economic growth than patents and licenses.”

"Economic benefits of standardization", Technical University Dresden (TUD) and the Fraunhofer Institute for Systems and Innovations



Simplifying the rules



It is only by adopting common standards that an industry achieves uncommon things.

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What is an open standard

- **Agreed-upon, published specifications that detail how to make or do something.**
- **In IT standards generally refer to interfaces and formats:**
 - API's, protocols and data and file formats
 - Can also refer to how to use these in combination.

Open Standards characteristics



- **Published without restriction**
 - other than reasonable royalties for essential patents
- **Public input to the design**
- **Control by an open industry organization**
- **Implemented by offerings available in the market**
- **On its way to being broadly adopted in the industry**
 - Network effect

Standards evolve and move through a maturing process driven by pragmatism, speed to market and efficiency.

→ Initiator → Core group → Standards body

Evolution to an Open Standard

Need

→ **Initiator**

→ **Core group**

→ **Standards body**

Open

Customer need for technical solution to known problem

Lack of industry accepted technical solution

May be competing technical approaches or single proprietary solution

Lack of interoperability

A company, individual or group of companies or individuals agree to address issue

Resources devoted to developing best technical solution, often in collaborative fashion

Interested parties publish specifications

Specifications publicly available sufficient to enable implementation, interoperability

Can be implemented with little or no restrictions; IPR either RAND or Royalty free.

Developers may create reference or commercial implementation

Developers declare intent to have solution accepted as standard

Standards body reviews technical solution, adopts as standard

Specifications publicly available are sufficient to enable implementation, interoperability

Can be implemented with little or no restrictions; IPR either RAND or royalty-free.

Standards body open to broad participation, open decision making process

Standard implemented in competing IT products by multiple vendors.

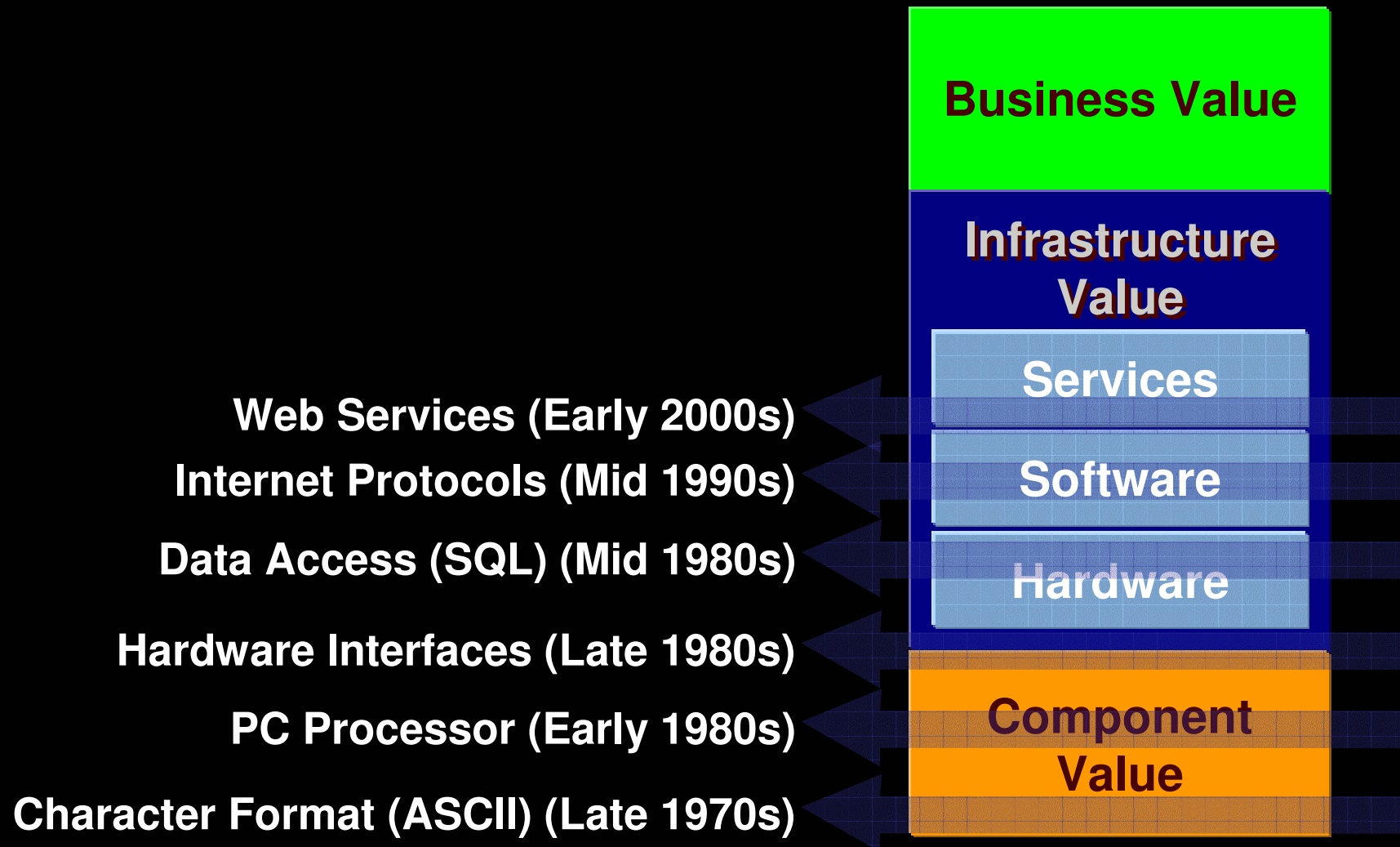
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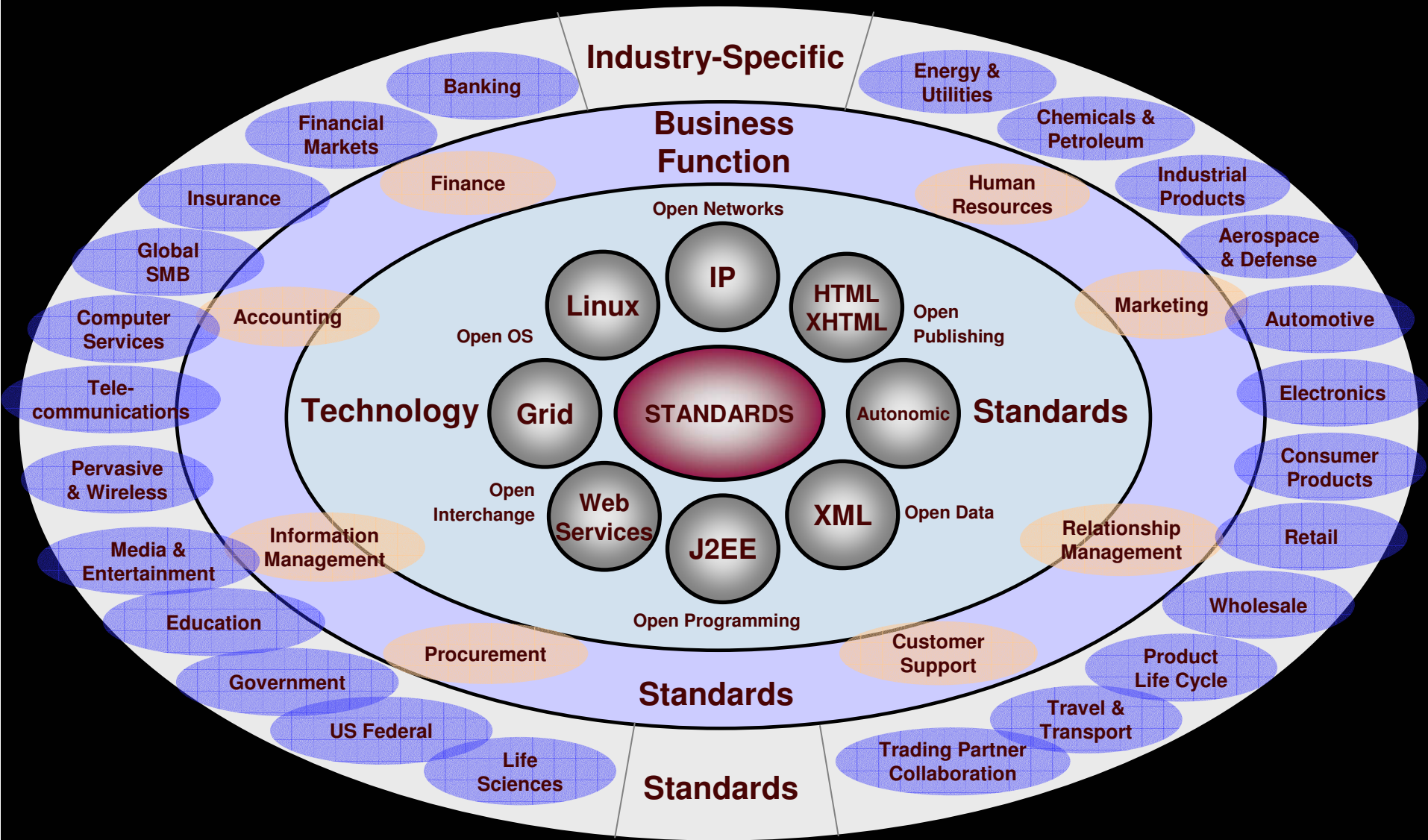
Movement Toward Technology Standards



The Progression of IT Standards – Simple view



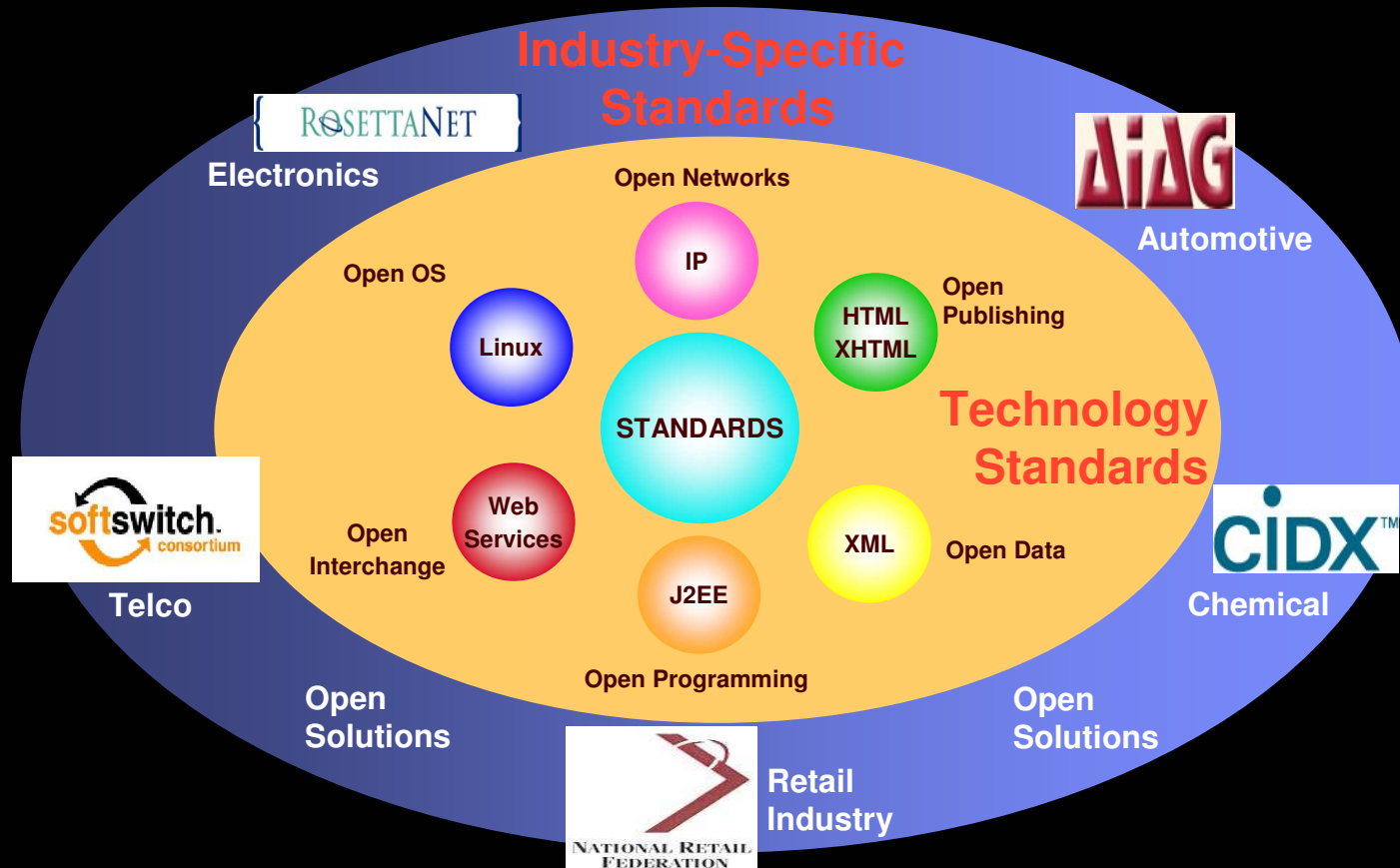
IBM is involved in the full spectrum of open standards



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An Open Standards Landscape



- A lot goes into establishing and maintaining industry standards
- There are lots of players involved & It's a complex process with lots of interdependencies
- So how do we make it all work together? *By working together*

Working together: An Example



Web Services Interoperability WS-I.org

- Founded in 2002
- More than 135 members
- Accelerates adoption and promotes interoperability

IBM Leadership in Open Standards



1998-99

- Java, XML and ebXML
- Co-founder and lead architect for RosettaNet
- Author of XML4J
- Chair OMG XML Metadata Interch. Format
- Co-author W3C Document Object Model
- FounderXML.org
- Elected to Board of Directors in OASIS



2000

- Web Services and UDDI
- Co-author of SOAP 1.1 and submission to W3C
- Cofounder of UDDI.org and author of original UDDI specification
- Co-author of WSDL
- IBM contributes SOAP4J to Apache



2001

- Web Services and Tools
- Led submission of WSDL to the W3C
- Co-chaired W3 Web Services Workshop
- Founder of Eclipse.org
- Co-author of W3C XML Schema standard
- Chair of Web Services Interactive Applications TC



2002

- Web Services and Security
- Founder and chair, WS-I Organization
- Co-author of web services bus process specification (BPEL, WS-TX, WS-TC)
- Co-author for Web Services Security roadmap and specification



2003

- Web Services Interoperability
- Submission of BPEL to OASIS and co-chair WSBPELTC
- Submission of Common Base Events and WS-Manageability to OASIS
- Co-chair WSDM TC in OASIS
- Led workgroup responsible for finalization of SOAP 1.2



2004-2007

- Web Services Management
- Chair of workgroup responsible for WS-I Basic Profile 1.1
- Co-chair of working group responsible for OASIS WS-Security
- Co-chair of OASIS WS-Notification TC
- Eclipse becomes independent organization
- More than 1,000 developers devoted to XML & more than 1,500 on Linux

Over 160 business
Integration technology patents

First Web Services Gateway

First integrated
Private UDDI directory



How to be involved

- **Direct involvement in standards bodies**
- **Requirements gathering through workgroup**
- **Validation of technical roadmaps and business plans**
- **Proof of concept**



Summary

- **Standards are essential for business & society**
- **The evolution of standards has a powerful effect on business strategies**
- **Need for standards across Technology and Industry**
- **Working together is critical for developing standards**



Thank You



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