

IT and Engineering

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Microsoft

Outline:

- Introduction
- The IT/Engineering Relationship
- The Virtual Team
- Product Development challenges
- 7 ways IT can enable product development
- Wrap-up

Introduction: Axian

- 15 year history serving product companies in the Northwest
- Front end consulting (from idea to strategy).
- Complete solutions provider
- Local, approachable, non-intimidating, fulfillment services

**"Consulting services you don't have to fear
and who will really be on your side!"**

Outline:

- Introduction
- The IT/Engineering Relationship

History of IT and Engineering relationships

- Who owns what?
- IT Fear of engineering high level needs or Engineering demand for autonomy
- Influence of Organizational structures on ownership
- Evolving CXO expectations for IT to be strategic

Who owns what?

- Some scenarios
 - IT owns everything
 - IT by Boundaries
 - IT – Network, Hardware and back office
 - IS – Financial operations
 - Applications by department
 - But what happens for enterprise apps and engineering?
 - IT is the “sidewalk”

The influence of organizational structure

- Centralized
 - Is IT at the exec table?
- P & L
 - Business units drive direction
 - What motivation to build infrastructure for the “whole” business?
- Matrix
 - Is the business strategy tied to infrastructure?
 - Is the functional component strong compared to the business units?

IT Fear vs. Engineering distrust

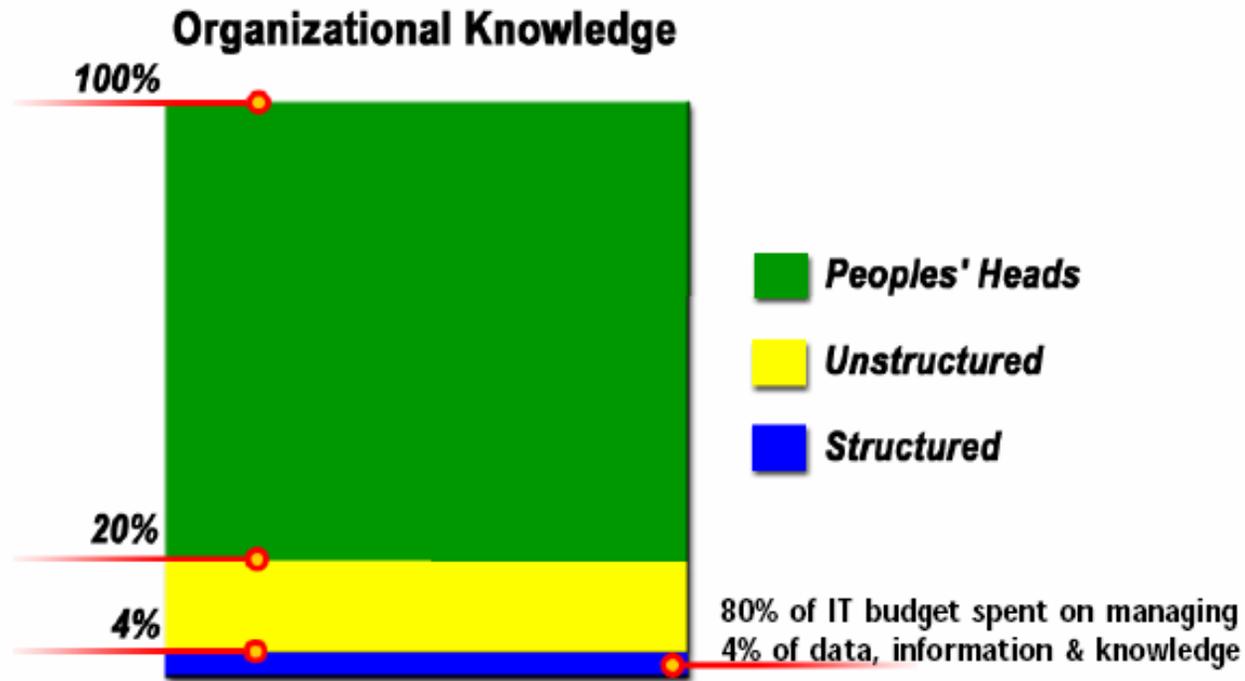
- From the eyes of IT
 - Expensive hardware
 - File system demands
 - High support needs
- From the eyes of Engineering
 - Under equipped and unsupported
 - IT doesn't understand need
 - Don't butt in...I want control of my computer

CXO's decision process

- No longer driven by:
 - Dot.com
 - Y2K
 - Popular investing
- Now driven by:
 - Real business benefits
 - Shareholders perceptions
 - Complexities of outsourcing
 - Penalties of remaining “as-is”

The truth about your corporate investments

People = Key to Organizational Competitiveness



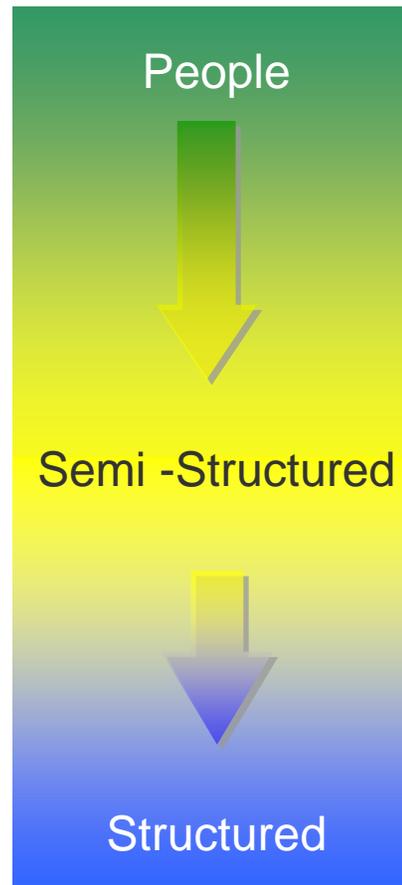
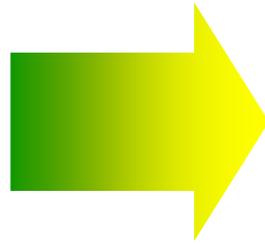
Source: Giga Information Group, Inc., "Collaboration, Content and Communities: An Update," 5/31/02, Daniel W. Rasmus

IT Spending Profile 2004-2005

- Save on Infrastructure
- Invest in Process
 - “The Bottom Line: Although GD (General Discrete) companies maintain flat IT investments in 2004, they plan to step up investment in 2005 to improve lifecycle value streams in new product introduction, supply chain transformation, and customer profitability”

Source: AMR, General Discrete Industry IT Spending Profile, August 27, 2004

The Digital Transformation



How to do it?

- Connect people
- Make it easier to interact with managed systems
- Blur the transitions for the user between unstructured and structured systems

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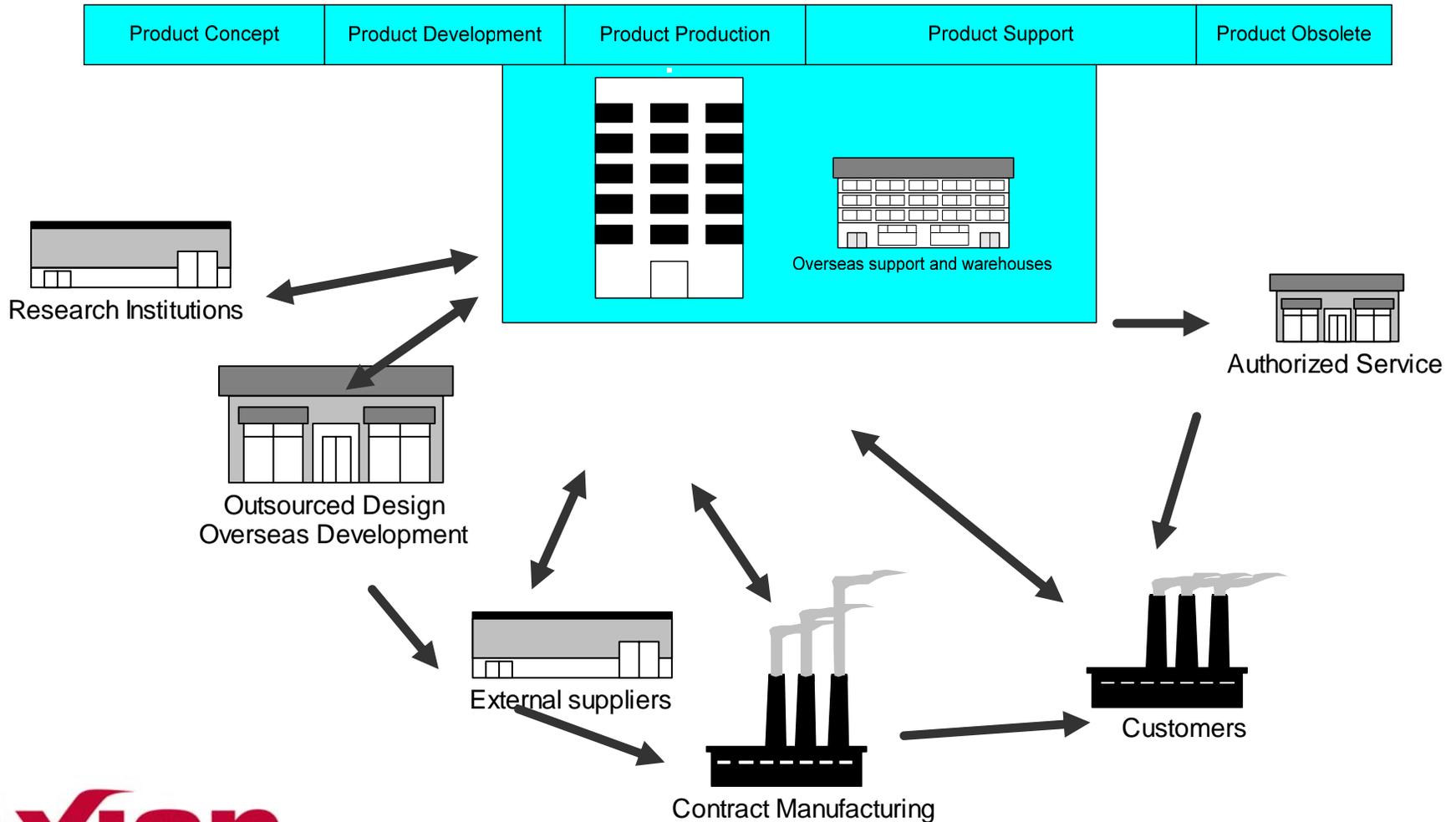
Today's Business Drivers (The Need)

- Real-time collaboration with Business partners & Contract Manufacturers
- Compliance demands
 - CE/UL/etc
 - Sorbannes-Oxley/Basel2
 - WEEE/RoHS
 - Export Controls
- Offshored design and production

The “Virtual” world of Engineering IT

- Co-location no longer the norm
 - Increased use contract research and design
 - Increased support demands from outsourced production
 - Reduced headcounts have eliminated supporting functions
- No “true” standards for engineering
 - There is no “Acrobat Reader” for engineers
 - Each discipline has it’s own “lingua”
- Must support designs for entire life of product
 - Economy has resulted in lengthy support of older products

Communications Chain



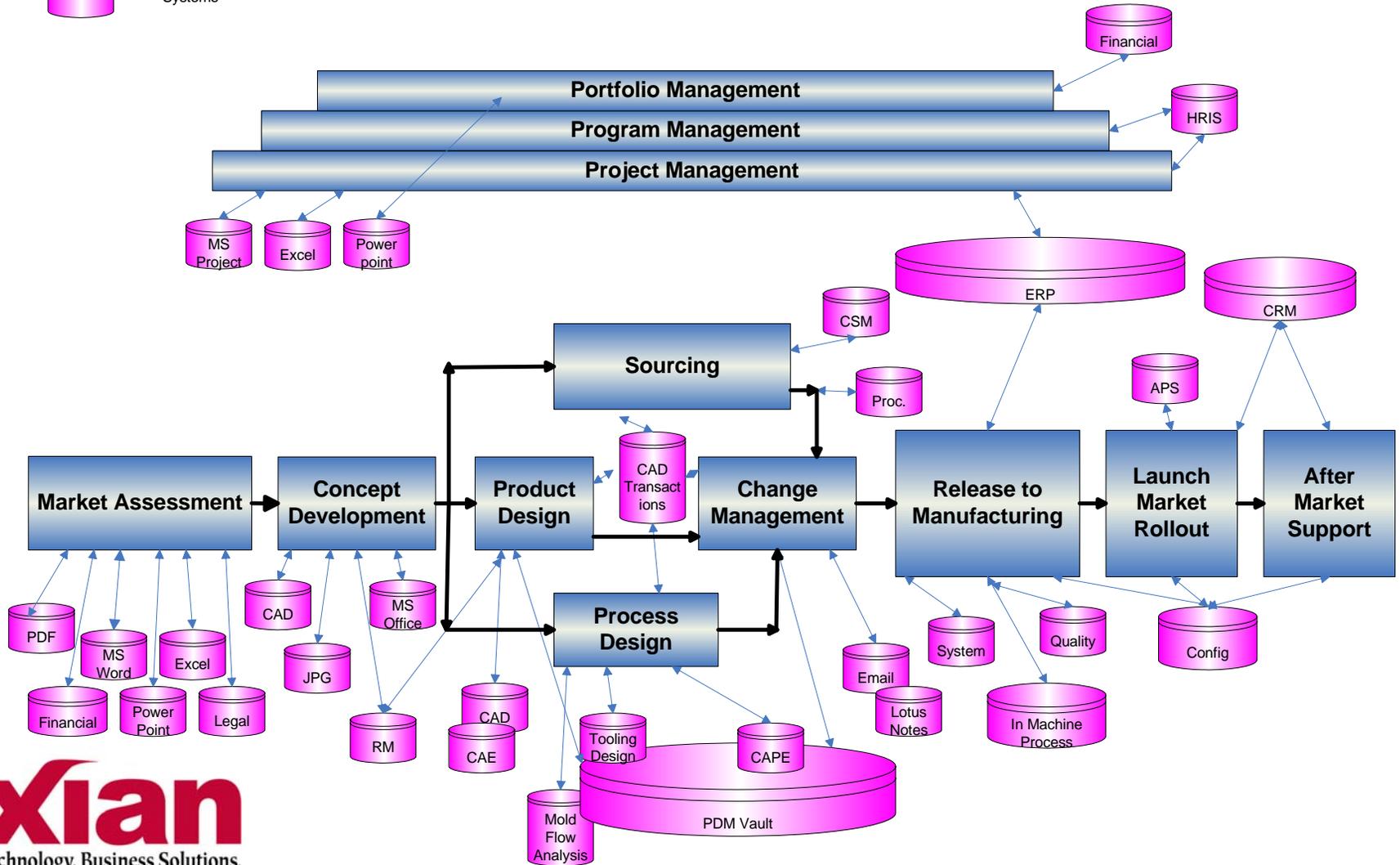
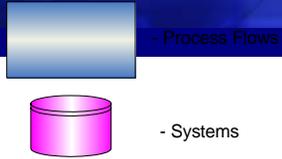
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What everyone needs to consider

- How much does it cost when design is “down”?
- Can production “read” engineering data?
- Is productivity hampered by technology?
- How many workarounds to “share” design data?
- How critical product information exchange is as the supply chain expands?
- How many systems are involved in sharing product information?
- Do you have the required expertise to support your systems?

Product Information and the Tower of Babel



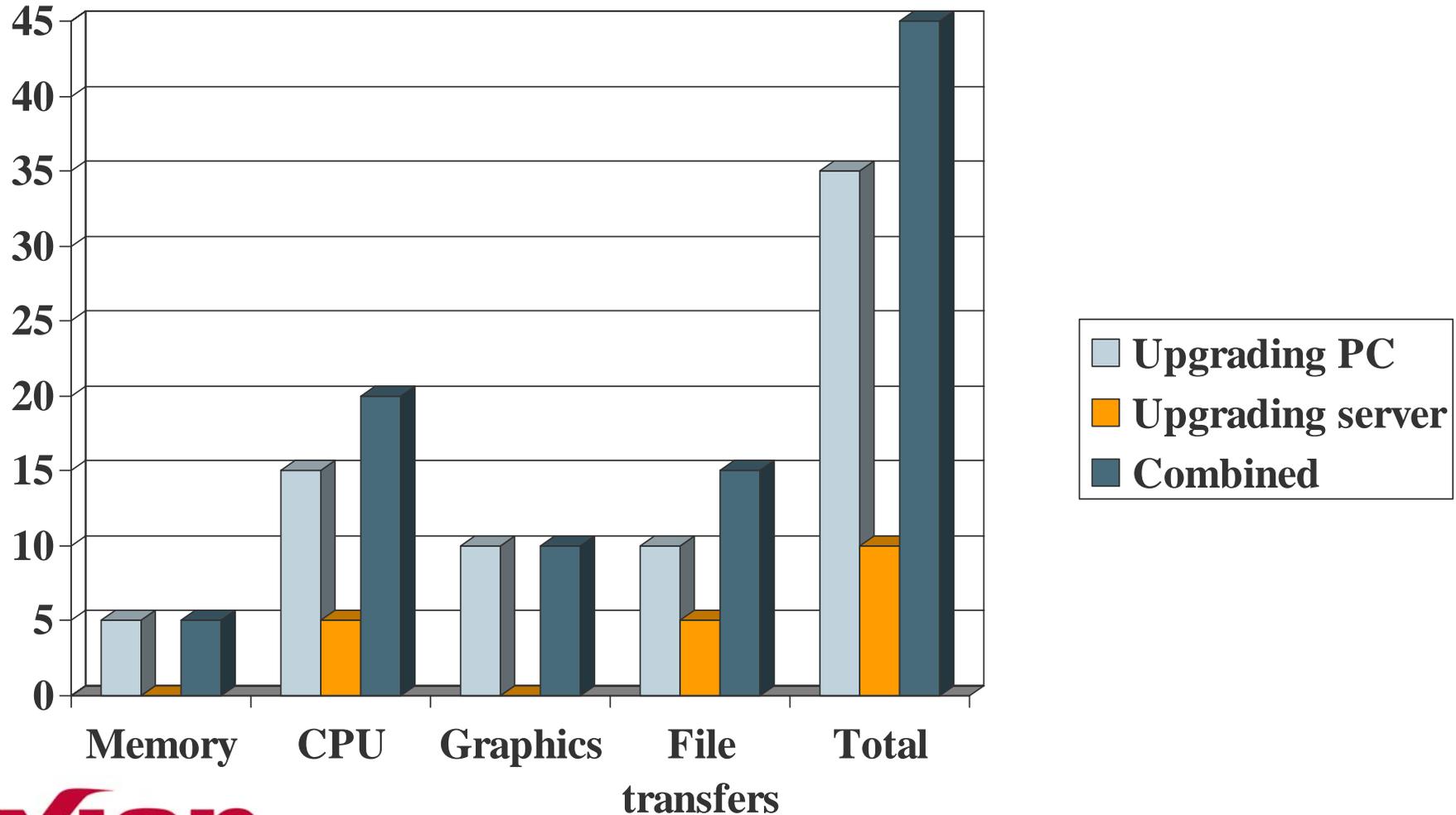
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- 7 ways IT can enable product development

Seven Ways IT can enable Product Development (and be the IT Hero)

1. Provide appropriate computing tools
2. Provide appropriate authoring tools
3. Provide appropriate tool training
4. Provide appropriate “publishing” tools
5. Provide appropriate access
6. Provide appropriate integrations
7. Provide appropriate support

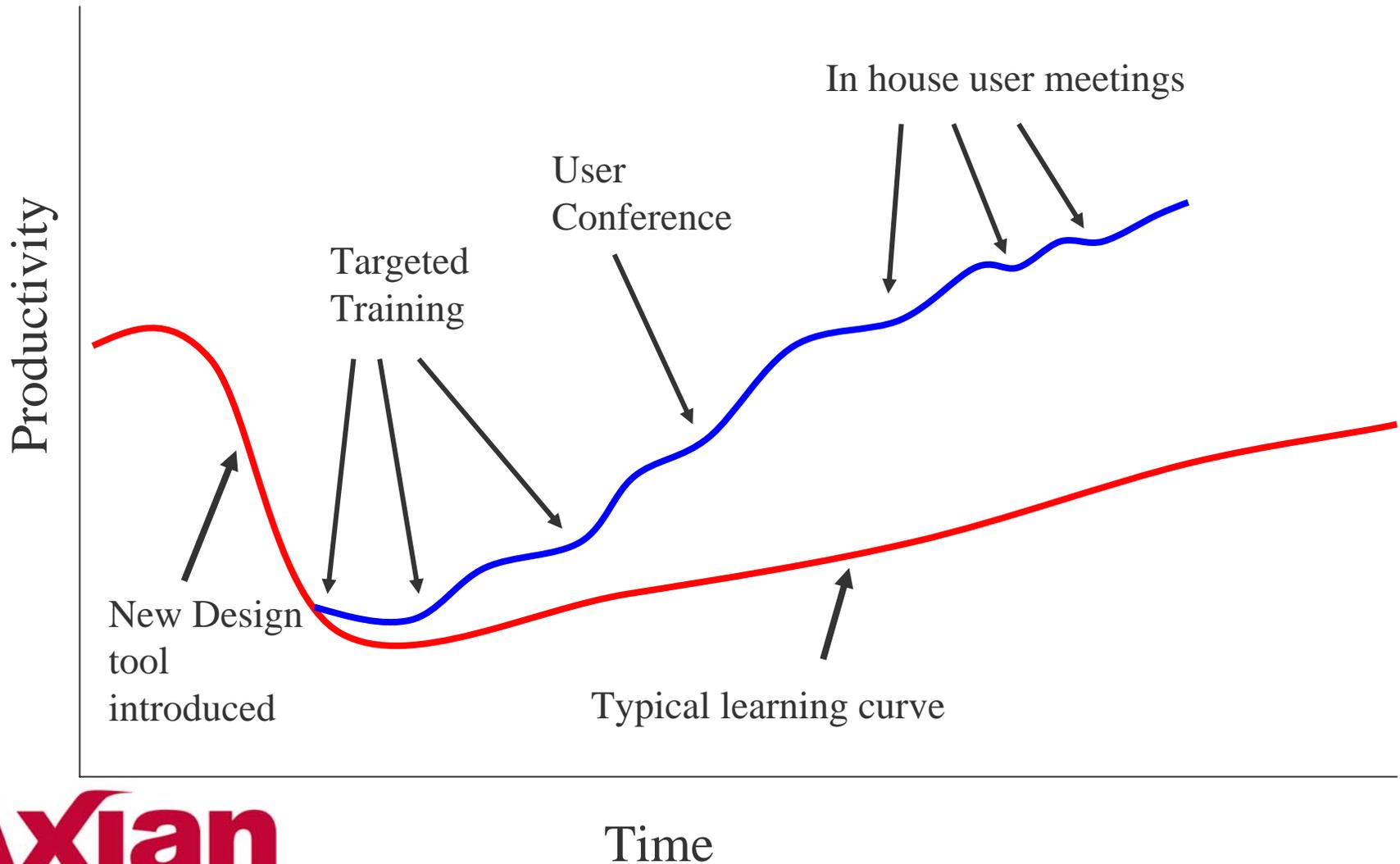
Computing tools



Authoring tools

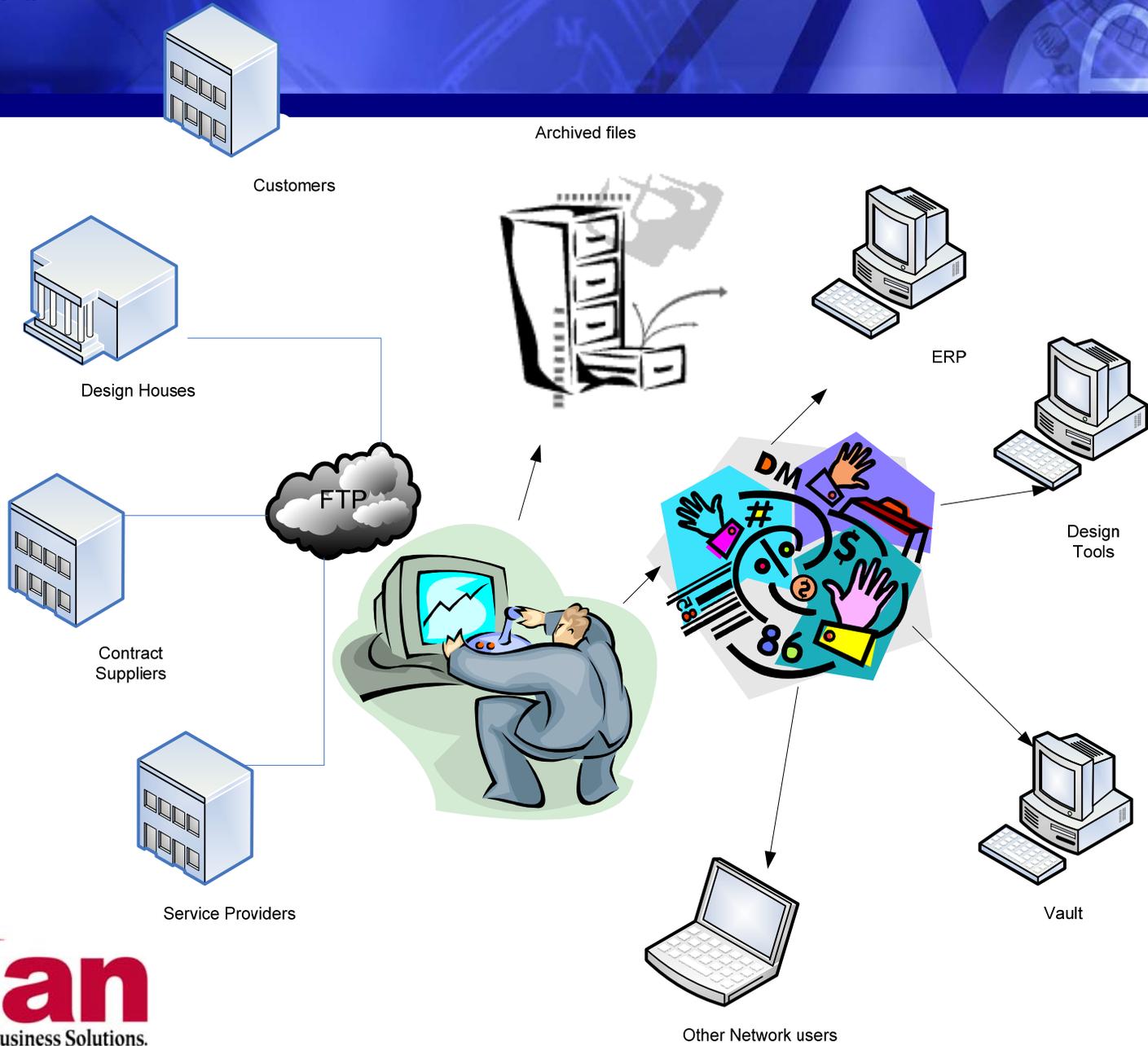
- “Independence” for design preference
 - Adds cost for data exchange
- Corporate “Standard” for skill transferability
 - Guarantees “detractors”
- Some “authors” are more valued than their adaptability to the tools
 - Must decide how and whether to support

Training and Productivity

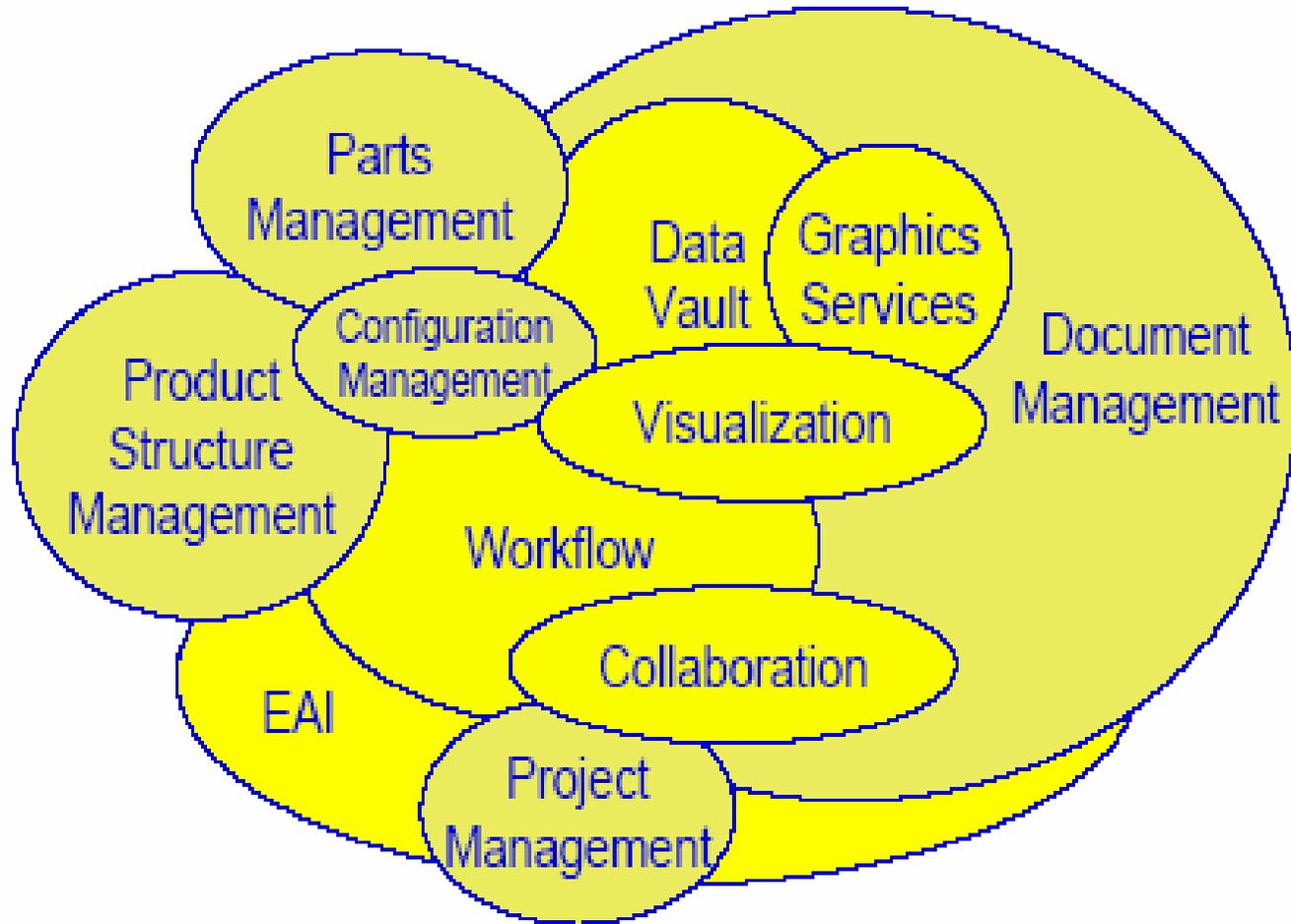


- Who needs design data and images?
 - Product documentation
 - Manufacturing
 - Service
 - Sales
 - Marketing
- But who generates images?
 - How?
 - At what cost?

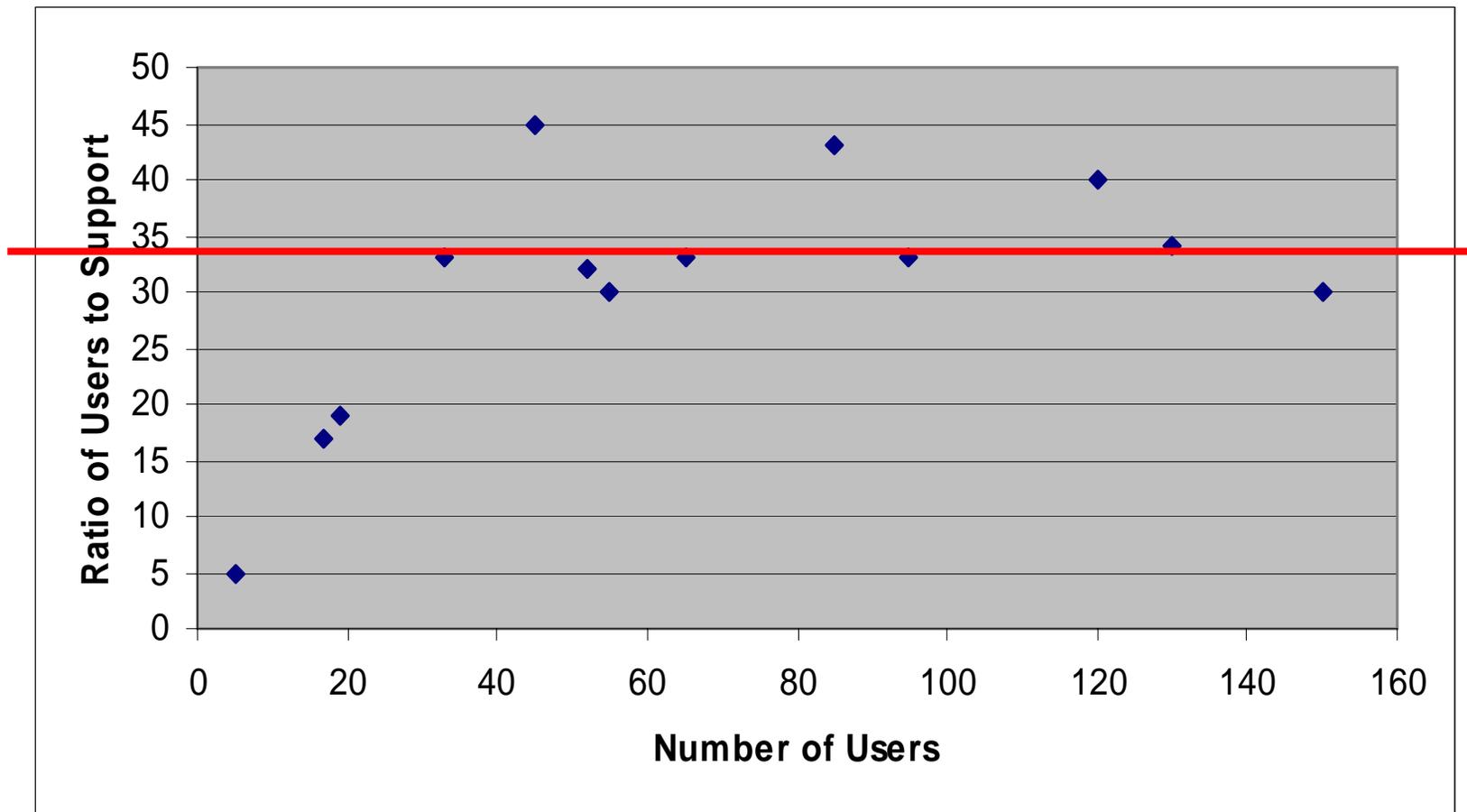
Access



Integrations



Support



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Summary

- Engineering-IT relationships are often strained
- Corporate structure affects ownership
- Engineering productivity issues cross functional boundaries
- It aids corporate profitability to enable engineering productivity

To reiterate: Seven Ways IT can enable Product Development

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