The Strategic Technology Planning Process

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t vs. T

- When you think about the term "technology" do you think of it as:
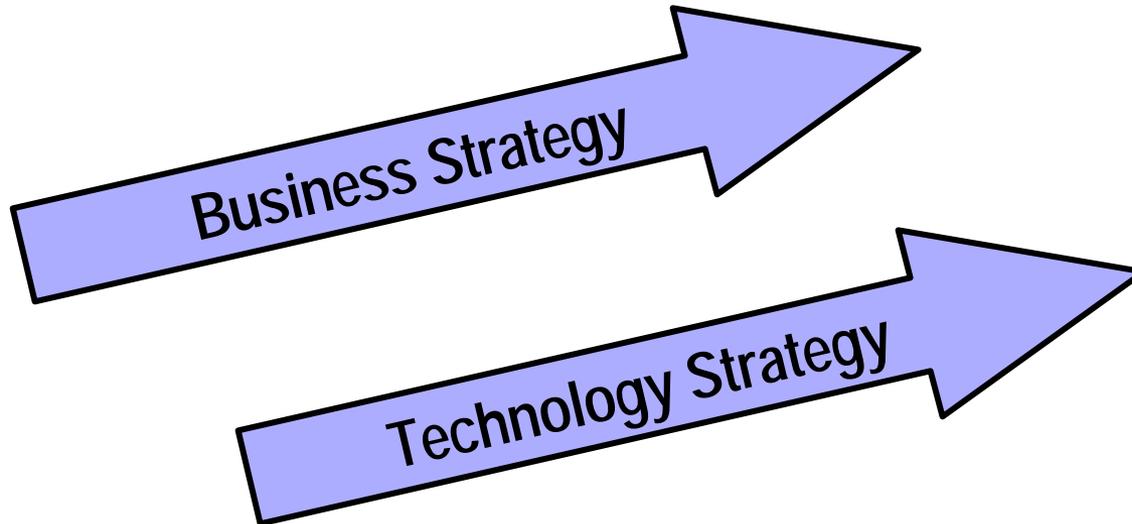
"The people that run our computers."

"A way of doing things."

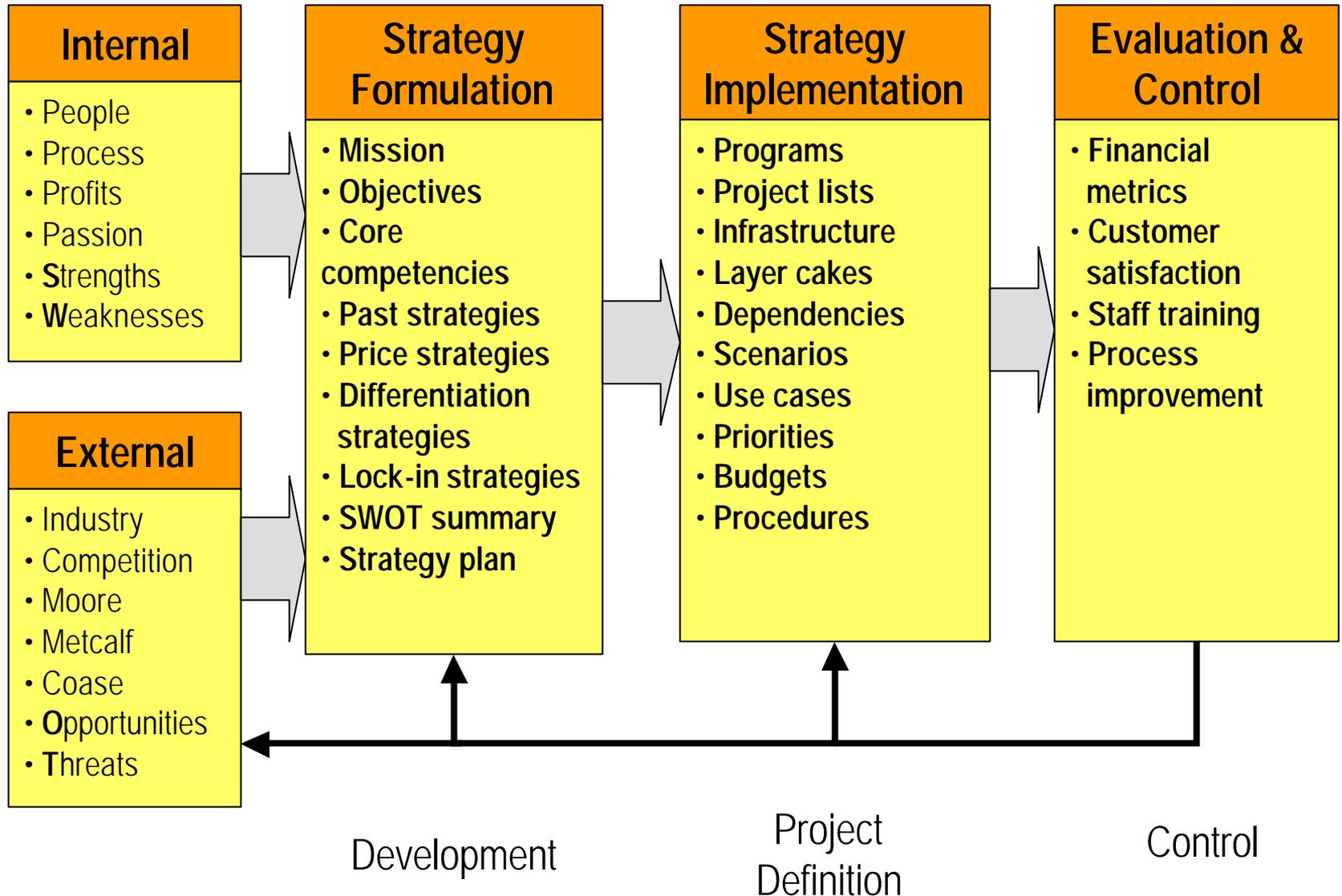**Tactical** ←——————————————————→ **Strategic**

Technology Alignment

- Make sure that your **business** strategy and your **technology** strategy are in alignment.
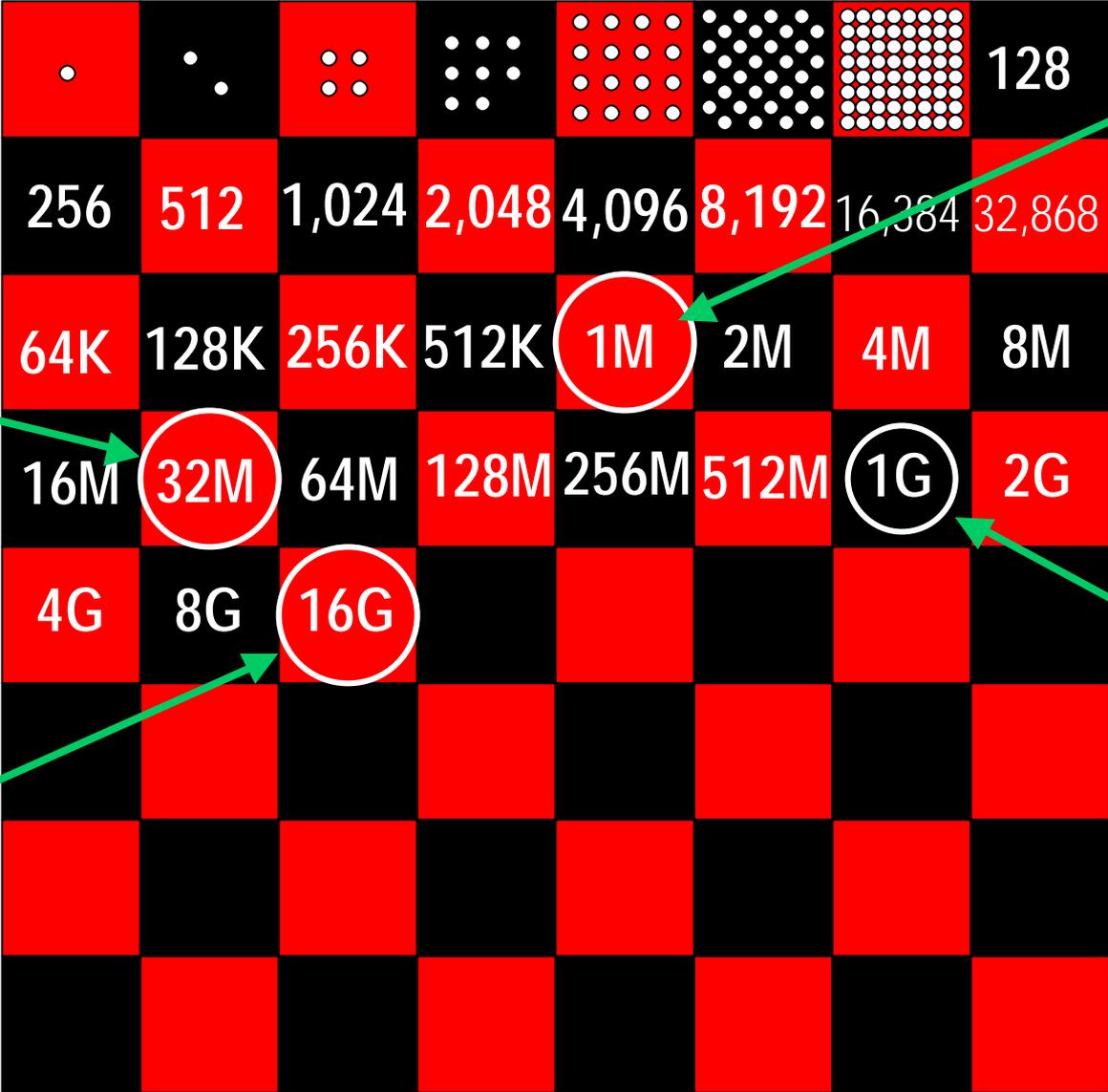
Strategic Technology Planning Process

Internal

- People
- Process
- Profits
- Passion
- **S**trengths
- **W**eaknesses

External

- Industry
- Competition
- Moore
- Metcalf
- Coase
- **O**pportunities
- **T**hreats

Strategy Formulation

- **Mission**
- **Objectives**
- **Core competencies**
- **Past strategies**
- **Price strategies**
- **Differentiation strategies**
- **Lock-in strategies**
- **SWOT summary**
- **Strategy plan**

Strategy Implementation

- **Programs**
- **Project lists**
- **Infrastructure**
- **Layer cakes**
- **Dependencies**
- **Scenarios**
- **Use cases**
- **Priorities**
- **Budgets**
- **Procedures**

Evaluation & Control

- **Financial metrics**
- **Customer satisfaction**
- **Staff training**
- **Process improvement**

Development

Project Definition

Control

An ancient Chinese mathematician...

... did a great deed for the Emperor of China. *"You may have anything in my kingdom you wish."* said the emperor.

"All I ask is for one grain or rice on the first square of my chess board and double that amount on each square till the board is full."
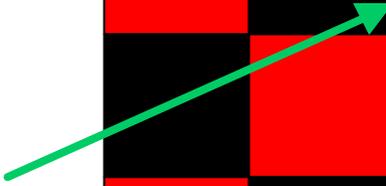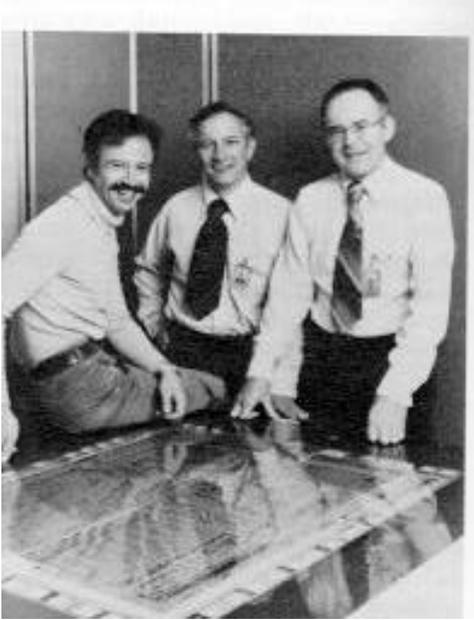
Cable Modem Speed (1Mbit/sec)

Number of Transistors on a Chip

Processor Speed (1GHz)

Hard Disk Size (Gigabytes)

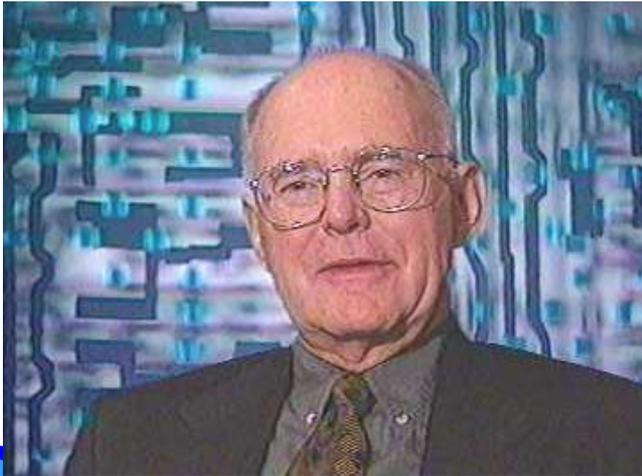|							
·	··	::	:::	::::	::::	::::	128
256	512	1,024	2,048	4,096	8,192	16,384	32,868
64K	128K	256K	512K	1M	2M	4M	8M
16M	32M	64M	128M	256M	512M	1G	2G
4G	8G	16G					

Moore's law

- First observed in 1965 by Gorden Moore, an engineer at Intel

- Density of integrated circuits was doubling ever 18 months

- Computer chips dropped in price by 50% every 18 months

- $1 has twice the purchasing power 1.5 years from now
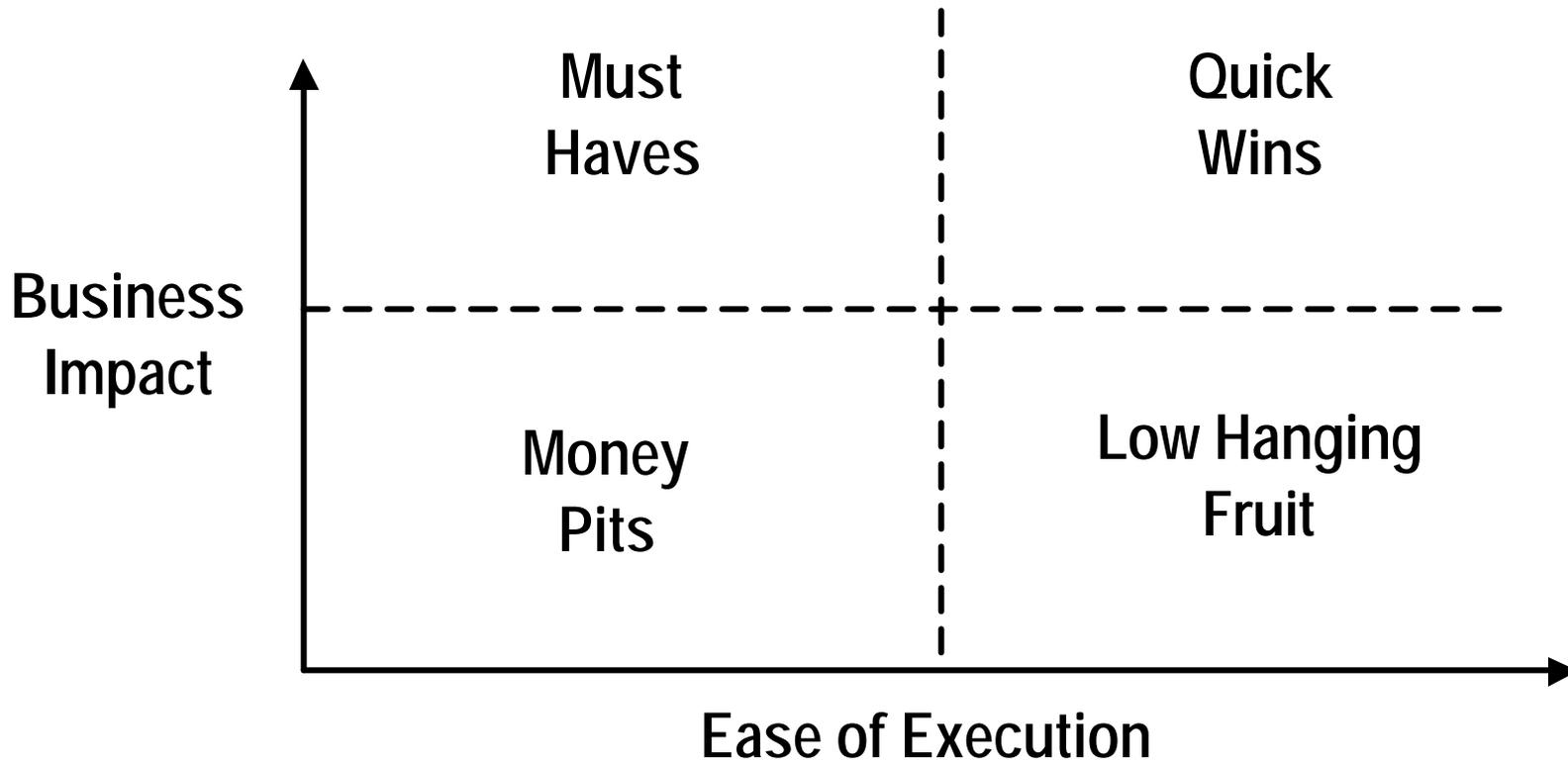
100 Years of Computing
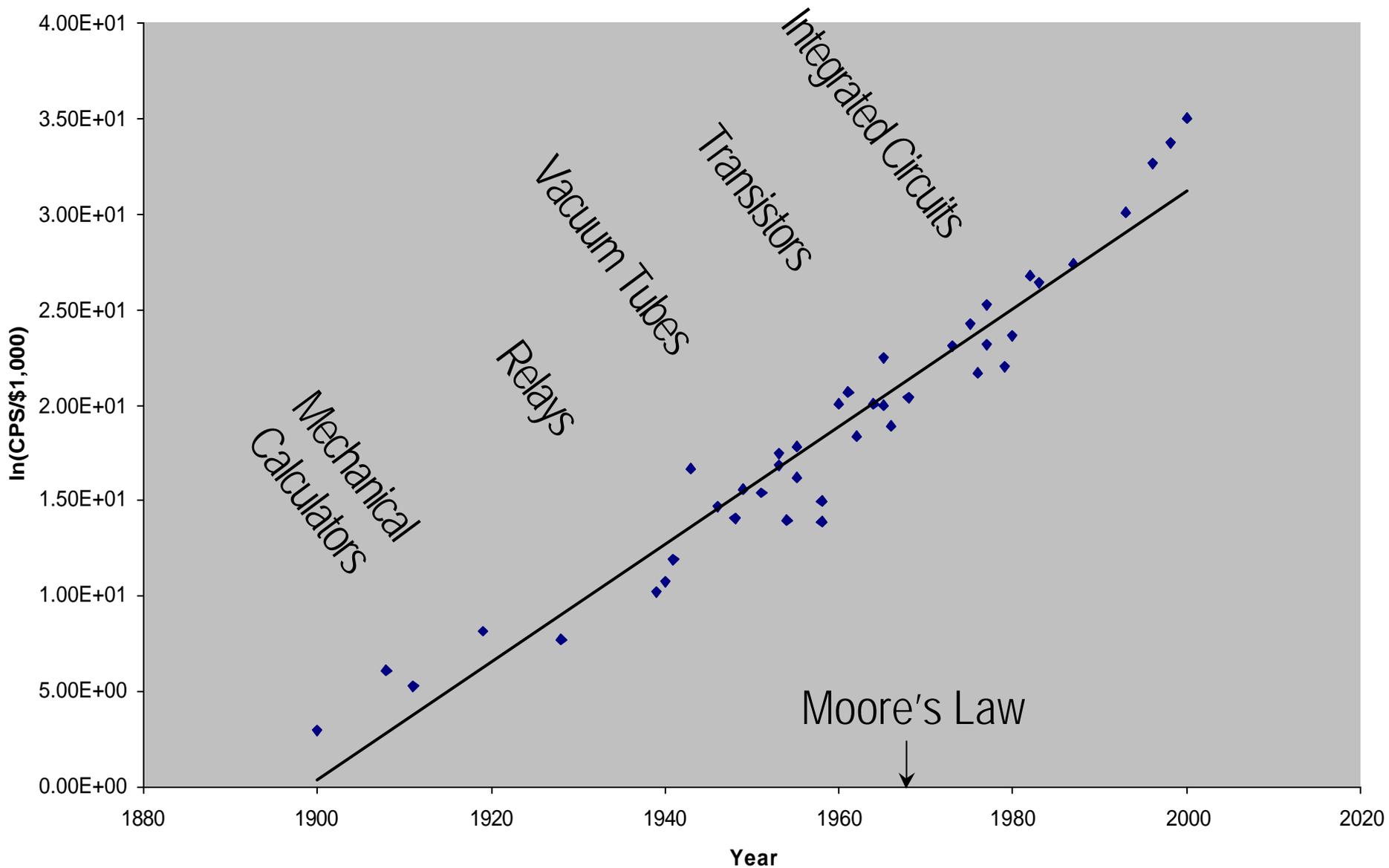
Metcalf's law

- The value of a network increases **exponentially** the more people are using it

- Standards
  - FAX
  - Web: 1992 <1% to 1996 >90%
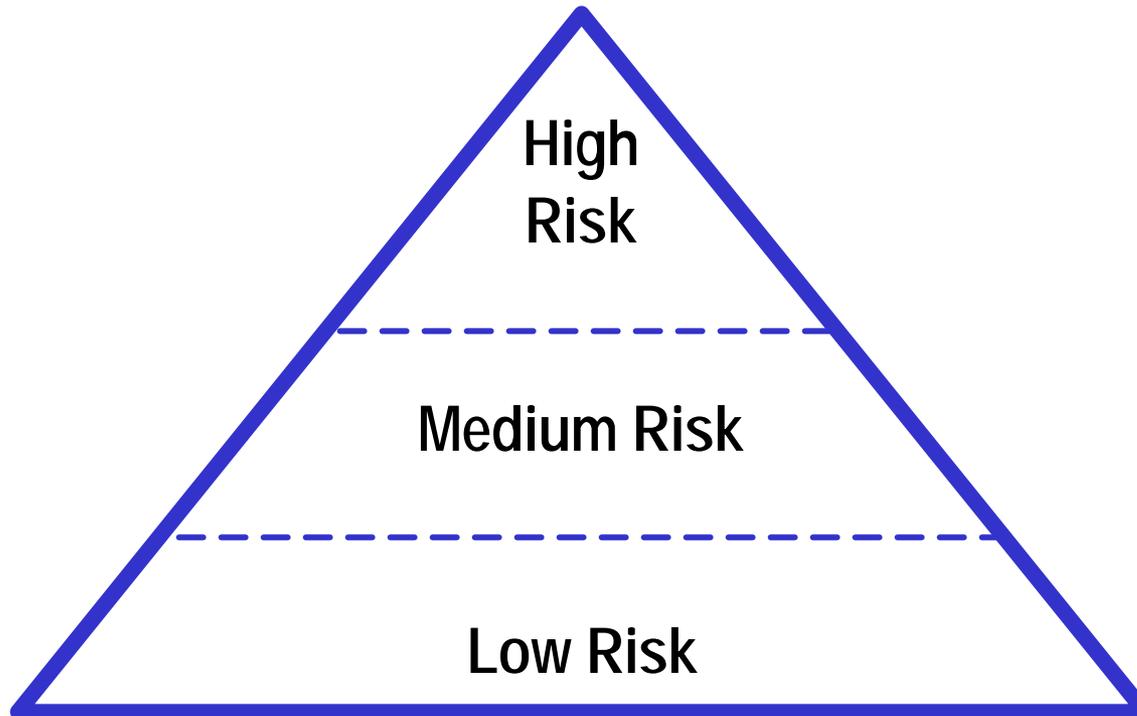 - XML: technology for "spontaneous exchange of structured data between computer system"

Project Prioritization Matrix

	Ease of Execution →
Business Impact ↑	

Must Haves | Quick Wins

Money Pits | Low Hanging Fruit

Source: Net Ready, Hartman et. el

Project Portfolio

Layer Cake

Web Browsers		Desktop		PDA
Sales Force Automation		Customer Service		Public Web Site
GL-AP-AR	MRP	CRM	Document Mgmt.	Web Content Mgmt.
Data Storage (RDBMS)		Information Storage		Messaging (e-mail, FAX)
Network Devices (routers, firewalls, VPN)				
Physical Wiring (cables, hubs)				

Iterative Development Process

e-Strategy

business opportunity analysis

Go/no-go decision points

preliminary marketing feedback

focus groups with willingness to pay feedback

build prototype & mock-ups

13
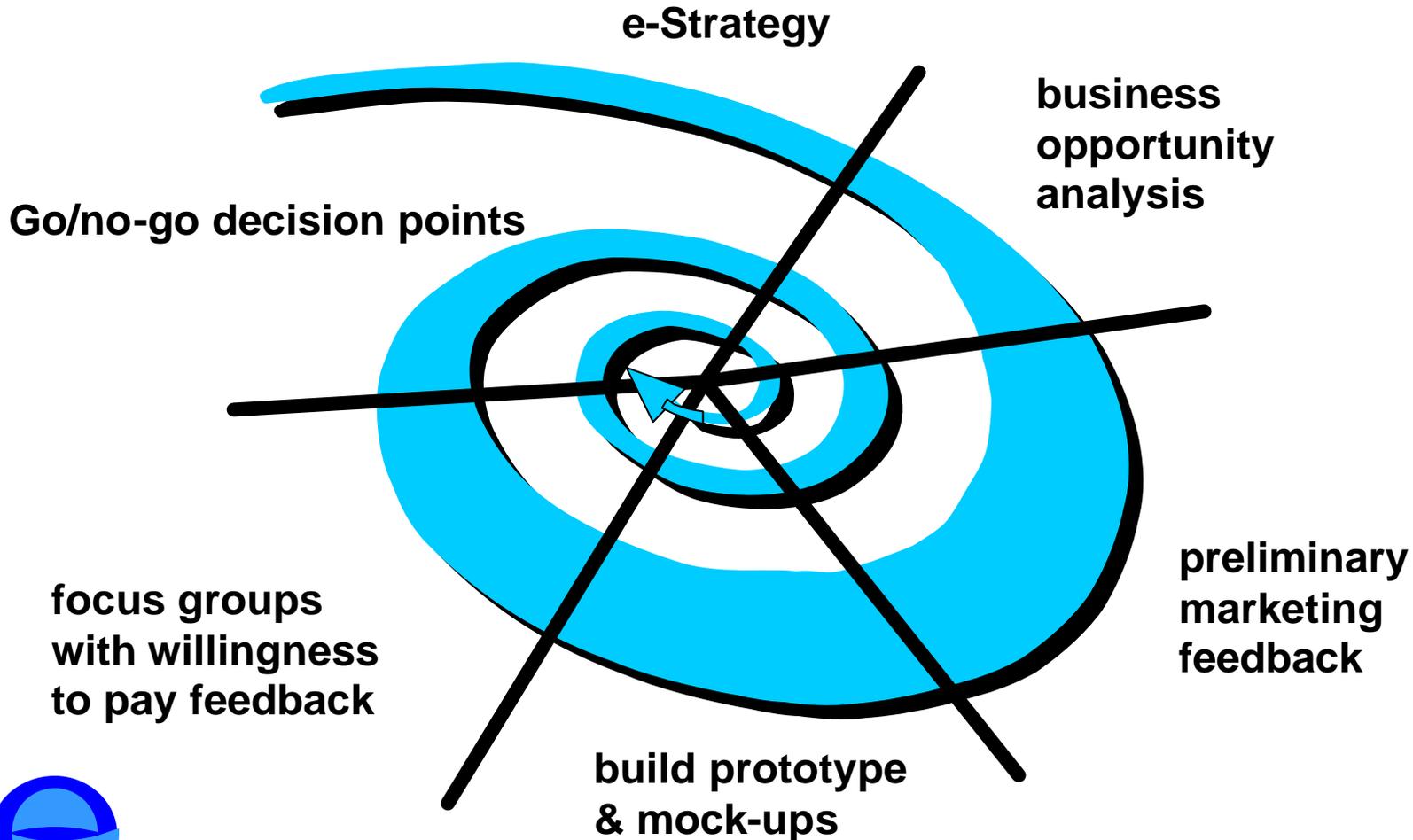
Balanced Scorecard

Financial

- sales volume
- revenue from new service offerings
- profitability by service type

Process

- sales pipeline
- order entry
- service set-up time
- call return time
- quality metrics

Customer Satisfaction

- web-based surveys
- customer suggestion box
- billing feedback
- customer retention

Staff Skills

- training
- certifications
- project management skills
- gap analysis
- future skill