Creating and Evolving a Technology Roadmap

What Is A Technology Roadmap?

- A technology roadmap is the collective vision of the opportunities for technology to serve a business.
- A technology roadmap is a mechanism for the identification, justification, planned evolution, and adaptation of technology to enhance business performance.

The Challenges in Building a Technology Roadmap

- The target architecture continuously evolves, so the technology roadmap must be an ongoing process.
- Technology has many masters, such as vendors, standards-setting boards, and trading partners.
- Unexpected roadblocks may occur.

Why Do We Need a Technology Roadmap?

- Without it companies run the risk of making sub-optimal technology decisions.
- The planning process tells an organization what they did where, where they failed, and how to improve.
- A technology roadmap limits the range of technology decisions.

External Benefits of a Technology Roadmap (Effectiveness)

- Achieves business goals by identifying the gap between the business plan and the current technological environment.
- Reduces complexity by reducing the number and variety of technological choices.
- Enhances interoperability of business functionality across lines of business.

External Benefits of a Technology Roadmap (continued)

- Increases flexibility
- Increases speed of implementation through common standards, methodologies and technology platforms.
- Preserves investments in new and existing systems by basing them on long-term considerations.
- Responds to market changes by building from an established framework.

External Benefits of a Technology Roadmap (continued)

- Focuses IT investment shillings/dollars
- Simplifies the response to new legislation
- Reduces difficulties associated with deployment of new technologies by utilizing fewer technologies, common platforms, and similar development approaches

Internal Benefits of a Technology Roadmap (Efficiency)

- Provides a common design point that facilitates end-to-end integration of reusable components and applications.
- Builds a consistent and cohesive technology base that can create a critical mass of skills dedicated to select technologies.

Internal Benefits of a Technology Roadmap (continued)

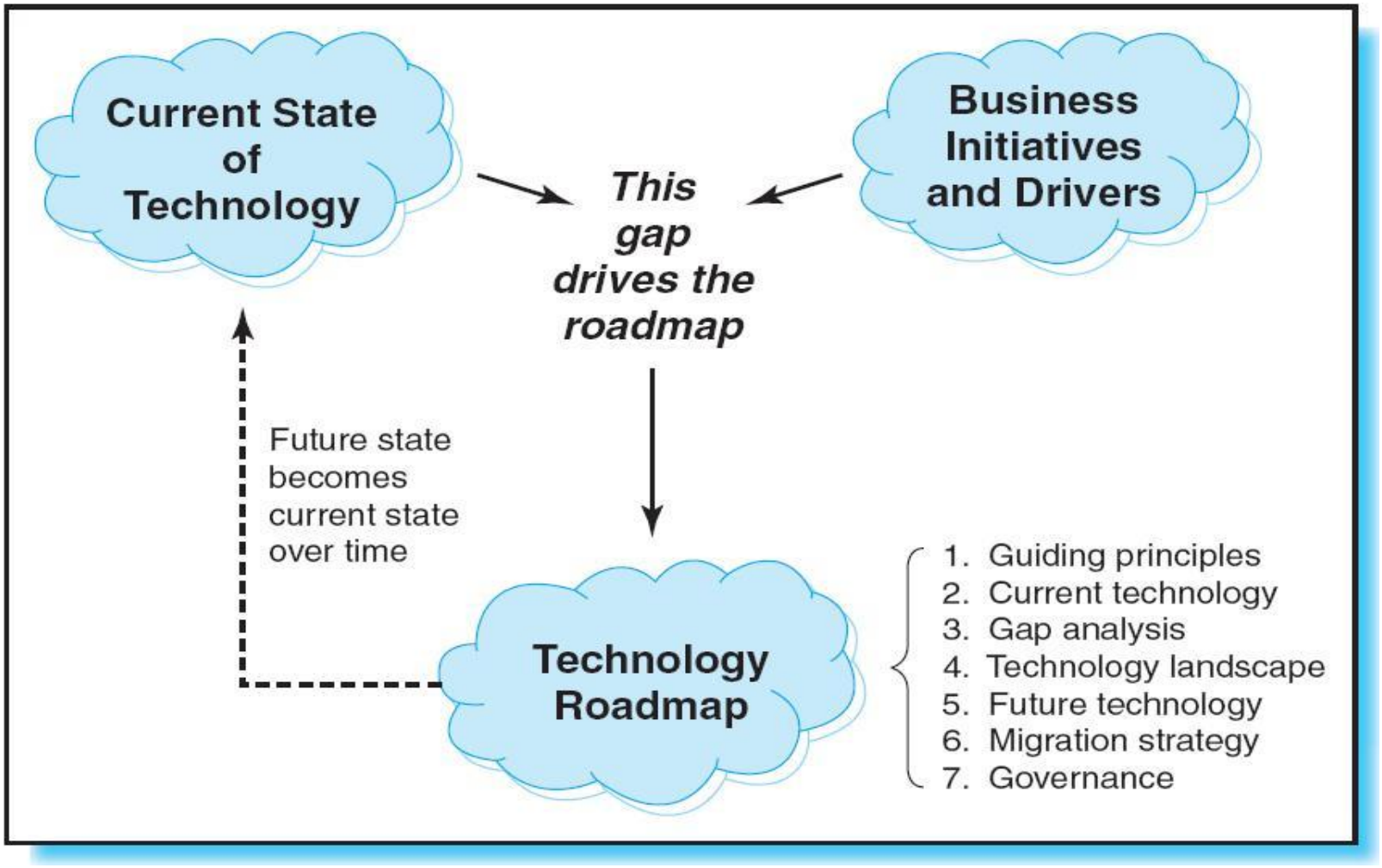
- Provides the ability to move forward in planned phases by providing an orderly evolution of each technology through a life cycle approach
- Consolidates global solutions by synchronizing local technologies into the global roadmap
- Lowers the cost of development and maintenance by increasing reusability of components

The Process of Developing a Technology Roadmap

Seven Important Activities are derived from the Gap between the Current Technology and the Business Plan:

1. Guiding Principles
2. Assess Current Technology
3. Analyze Gap
4. Evaluate Technology Landscape
5. Describe Future Technology
6. Outline Migration Strategy
7. Establish Governance

The Process of Developing a Technology Roadmap Continued



Guiding Principles

- Establish a statement of the role and purpose of technology within the business.
- Define how technology supports the business.
- Define the overall type of technology support to be delivered with a sense of performance.

Guiding Principles - *Examples of Key Principles*

- **Establish investment boundaries**. "We will invest in technology at a rate necessary to sustain our business growth"
- **Outline the role of technology for the organization**. "We will adopt a 'fast follower' strategy, aggressively adopting proven, architecturally compliant technologies."

Guiding Principles - *Examples of Key Principles* (continued)

- **Outline the role of technology within the industry**. "Technology is a core business competency."
- **Reinforce the role of standards**. "All components will adhere to open industry standards."

Guiding Principles - *Examples of Key Principles* (continued)

- **Specify the role of support**. "We will assist employees with technology problems that occur via call centers, desktop support, self-help, and/or service-level agreements."
- **Outline development preference**. "We will buy first, build second."

Guiding Principles - *Examples of Key Principles* (continued)

- **Establish expectations.** "Service levels and availability are outlined for all production systems."
- **Adherence to regulatory standards.** "We will be security and privacy compliant."
- **Specify timeframe.** "The 'future' in our technology roadmap has a three-to-five-year horizon."

Assess Current Technology

- Outline the current technologies and their state.
- At a minimum indentify the business process area, vendor, level of support, dependencies, criticality, and life cycle.
- Assign a technology owner who is responsible for each technology domain including acquisition, maintenance, vendor relationship management, training, and documentation.

Analyze Gaps

- Perform a gap analysis between the current technology and what is needed.
- Identify the required technology.
- Build technology in anticipation of business change and growth.
- Bridge the gap between business being driven by innovation and growth and IT benefits being derived from standards and reusability.

Evaluate Technology Landscape

- Firms must invest in R & D to keep abreast of new technologies.
- The size of this investment should be driven by how critical IT is to the business.
- The roadmap should articulate how large this investment will be, how it will be enacted, who is responsible, and provide guidelines to assist this initiative.

Describe Future Technology

- Describe the technologies to be adopted in the future.
- The roadmap should include the logic that was used to recommend these technologies to permit constructive input from business managers to challenge these recommendations.
- The roadmap should include all assumptions.

Outline Migration Strategy

- Outline a Migration Strategy to get from the current technology to the future technology platform.
- Two common strategies are the *gradual evolution* and the *big-bang*.
- A major challenge is to assign priorities to technology components that need to be changed.

Establish Governance

- Define an established process to determine who is responsible for creating/updating the technology roadmap and who approves changes to the roadmap.
- Distinguish between *strategic architecture governance* and *tactical architecture governance*.

Practical Steps for Developing a Technology Roadmap

1. Be bold and innovative when planning the roadmap.
2. Align technology with the business.
3. Secure support for the roadmap.
4. Don’t forget the people.
5. Control, measure, and communicate progress.

Migration Strategy Principles

- Migrate from production-centric to process-centric applications architecture using service-based architecture.
- Deploy component-based applications to minimize costs.
- Utilize components based on industry standards.
- Utilize middleware to minimize application changes.

Conclusion

- The purpose of the technology roadmap is to guide the development of technology in an organization.
- The technology roadmap communicates the role that technology will play in advancing business goals.