



Frontiers in Sustainability Research

Energy and Sustainability in the 21st Century

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The Conference Board

Mission:

To create and disseminate knowledge about management and the marketplace to help businesses strengthen their performance and better serve society.

Global, Independent, Public Purpose Membership Organization that:

- Conducts research
- Brings executives together to learn from one another
- Convenes conferences
- Publishes information and analyses
- Makes forecasts and assesses trends



Sustainable Business Growth

The creation and incorporation of environmental and societal values upfront in the business process to create better financial returns and a better world for the future

Source: The Tebo Group



Business & Energy in the 21st Century Project

- **Three Year Cooperative Agreement with ENERGY STAR** – also supported by several companies
- **Goals consistent with TCB Mission**
 - ◆ Understand best company energy management practices
 - ◆ Disseminate them through TCB channels
- **Basic assumption:** *Improving energy efficiency and diversifying supply contributes to business sustainability and societal/environmental well-being*
- **What we've done**
 - ◆ **Research** on general energy issues company practices
 - ◆ **Meetings and conferences**
 - ◆ **Published reports** –
- **Final Project – Energy Roadmap**



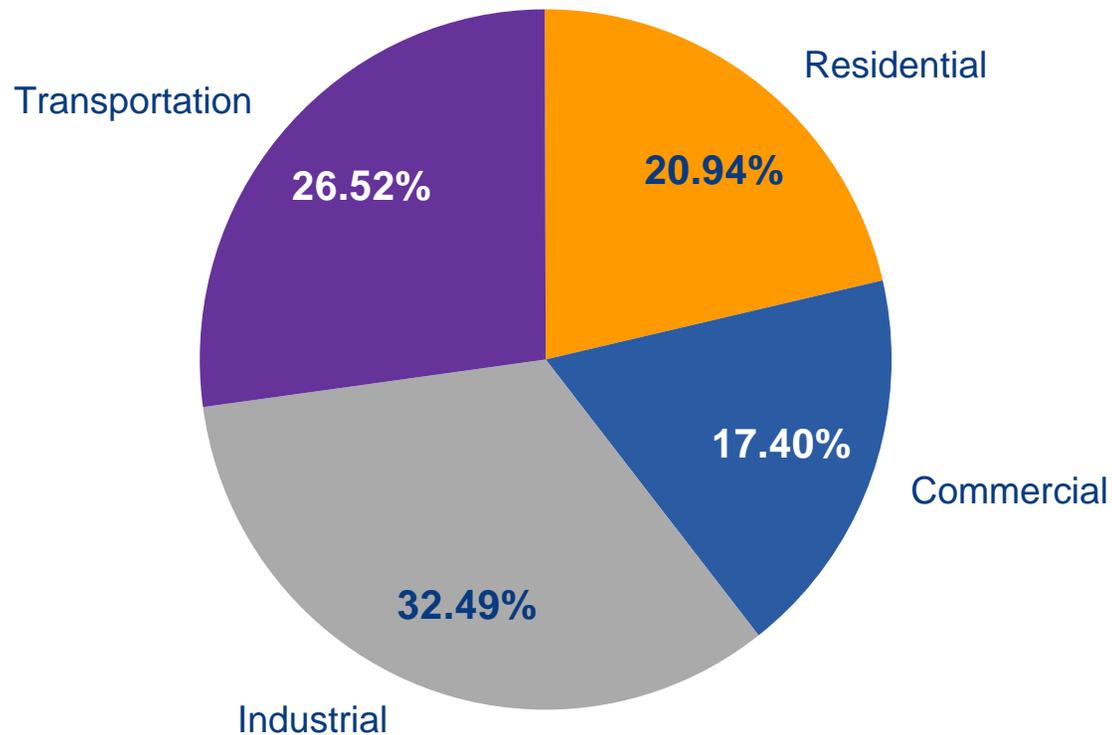
What's Going On in the World of Business & Energy?

- **The Global Energy Situation is Changing**
 - ◆ Rapidly, Dramatically
 - ◆ Many – but not all – believe permanently
- **The Global Business Environment is Changing**
 - ◆ Rapidly, Dramatically
 - ◆ Most believe permanently
- **Energy is Essential to Business Success and**
- **Business is a Major User of Energy**
- **Combined this Evolving Situation Demands a New – Strategic – Approach to Energy Planning and Management in Business**



Business: The Nation's Largest Energy Consumer

97 quadrillion Btu flowed through U.S. distribution channels in 2002

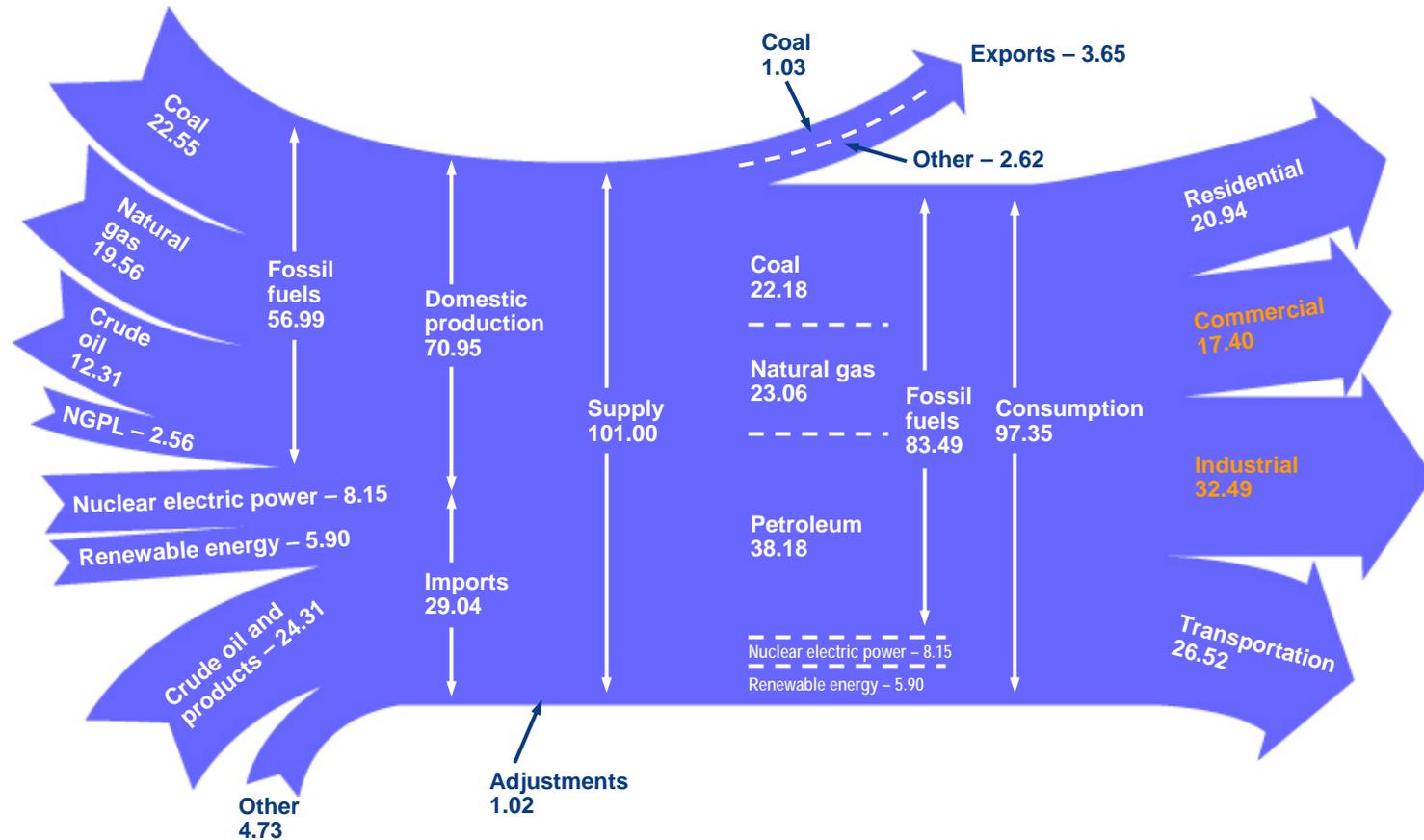


Source: Energy Information Administration



Energy Flows 2002

(Quadrillion Btu)



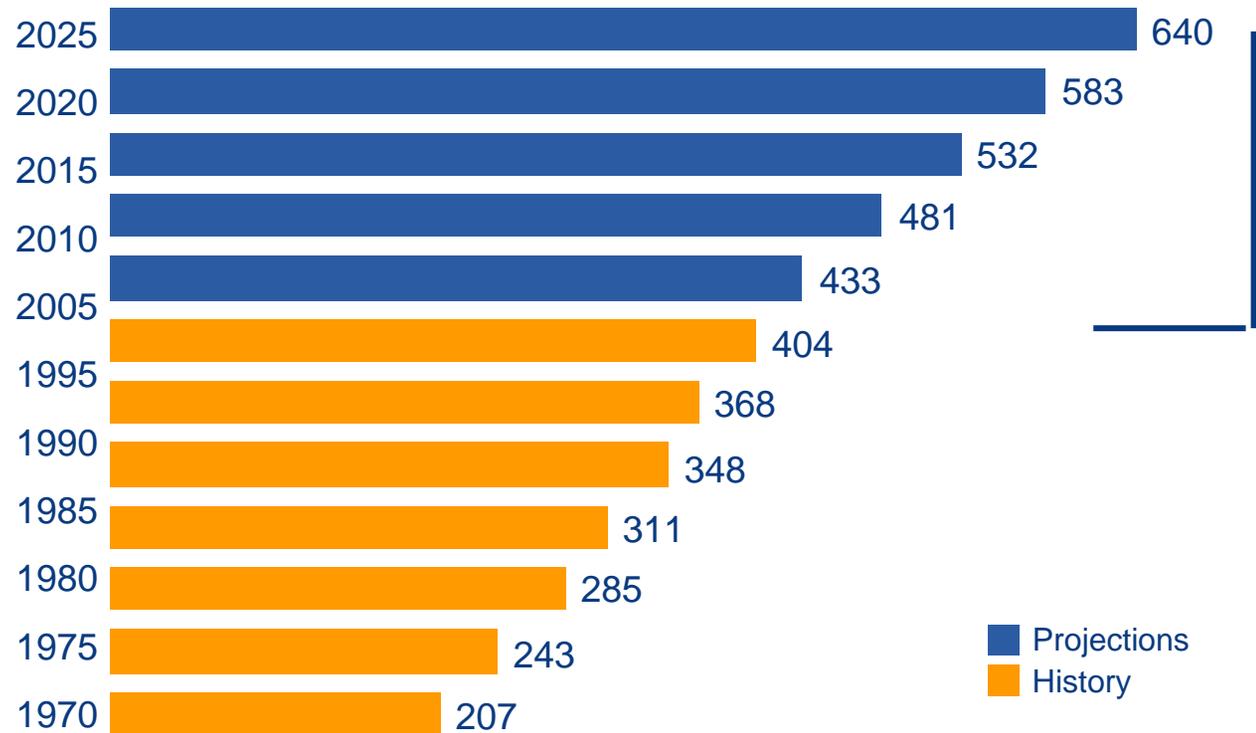
Source: Energy Information Administration



Energy Demand: What's the Prognosis?

Nearly 50% Increase in 20 Years

World energy consumption, 1970-2025
Btu (in quadrillions)



Source: "History": Energy Information Administration (EIA), *International Energy Annual* 2001, DOE/EIA-0219 (2001) (Washington, D.C., February 2003).
"Projections": EIA, *System for the Analysis of Global Energy Markets* (2003).

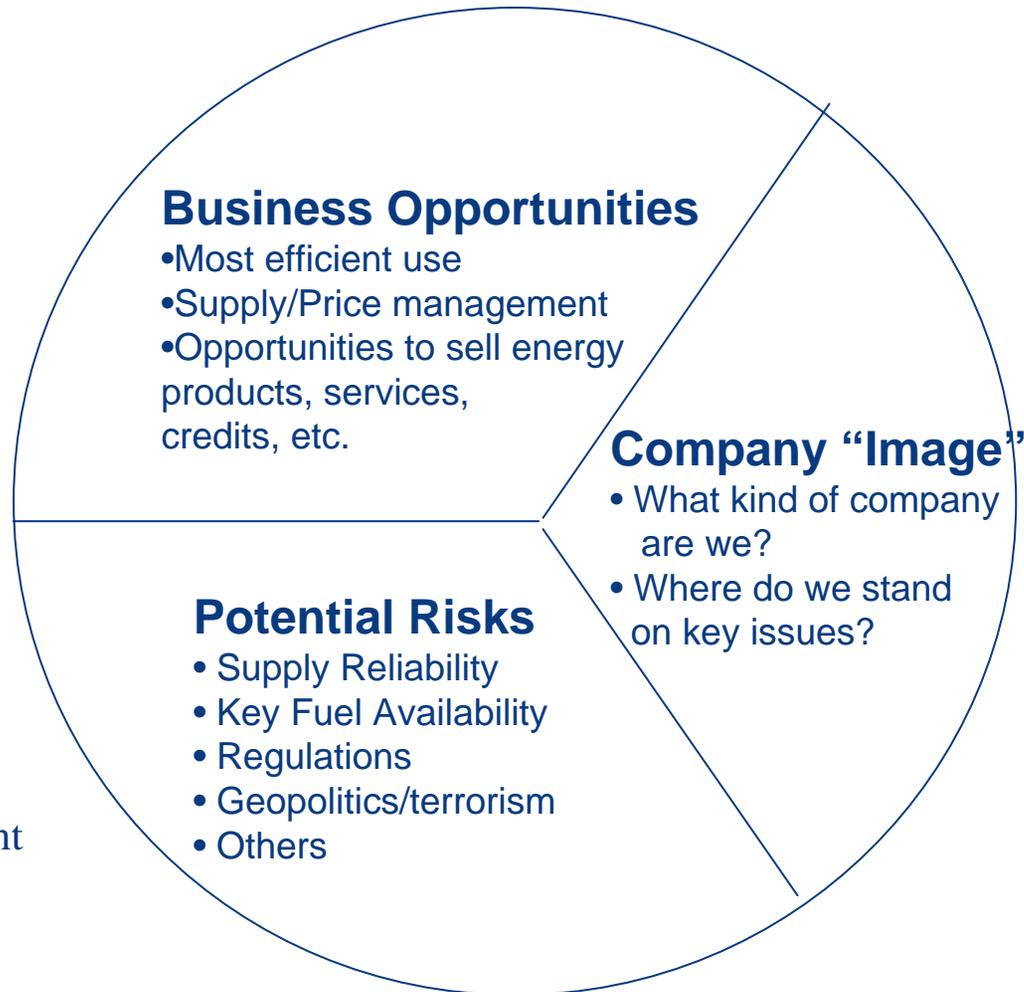


Key Findings – Business & Energy in the 21st Century Research

- **Approaches** to energy management across American business are truly diverse
- **Motivations** for energy productivity vary
- **Accountability** for energy productivity similarly variable
- **A Variety of Priorities and Management Approaches** occur across sectors
- **Perceptions** vary widely regarding the control businesses have over cost and supply
 - ◆ Few respondents to 2003-2004 survey categorized energy management as primarily a strategic business issue
- **Public reporting** on either energy policy or productivity data is limited



Key Findings, cont. – “Drivers Vary”



The relative size of the wedges will vary for different companies.



The Time for Strategic Energy Management is Now

The decision to take a strategic approach to energy is not unlike any strategic business decision. Given the changing energy situation and its importance to business success, the time to evaluate opportunities is now, and the Roadmap provides a process for doing so.



“The Roadmap for Business: Planning for and Managing Energy for Results”

■ Why Create It?

- ◆ **It hadn't been done/the need is there**
- ◆ **Opportunities for economic/environmental benefit in both business and societal terms**
- ◆ **Need for understanding of how energy relates to the business mission**
- ◆ **Need for understanding of necessary cultural & operational changes and how to make them**
- ◆ **Leading companies willing to share their expertise to multiply the effect globally**



“The Roadmap for Business: Planning for and Managing Energy for Results”

■ What is it?

A management system design that

- ◆ **Addresses all potential aspects of energy management and which**
- ◆ **Is adaptable to individual company needs and objectives**
- ◆ **Essentially a system for managing energy Sustainably**
 - For the company
 - For the environment



Four Stage Process: Each Step Depends on the Previous One

Step One: Assessment

- Evaluation, risk analysis
- Alignment

Step Two: Design Process

- Consider factors – resources, priorities, company culture, etc.
- Decide approach – companywide/other, integration, funding

Step Three: Evaluate Opportunities

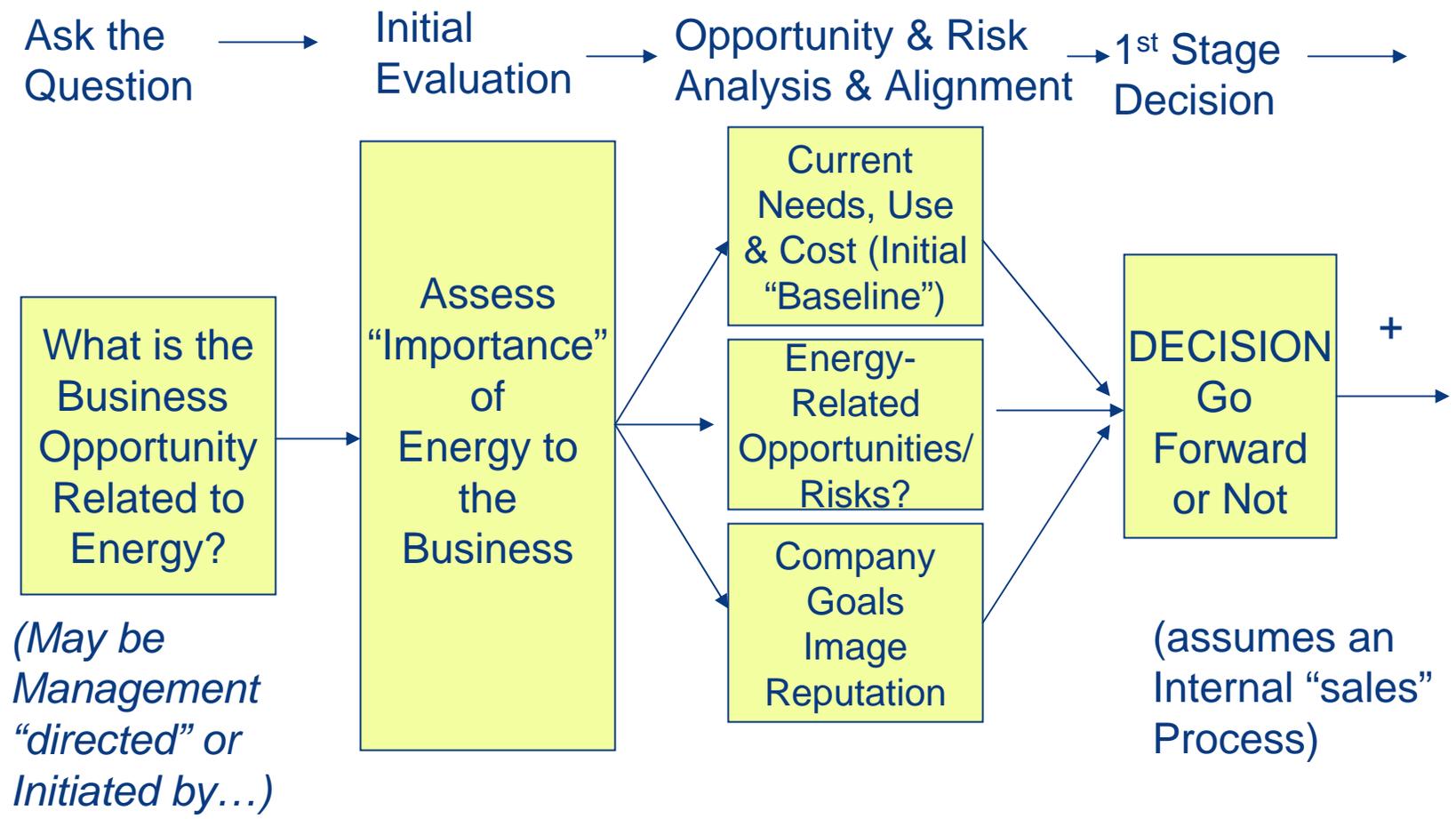
- Three pathways – supply, efficiency, products/services
- Create baseline for measuring progress
- Organize along each appropriate pathway

Step Four: Implementation & Review



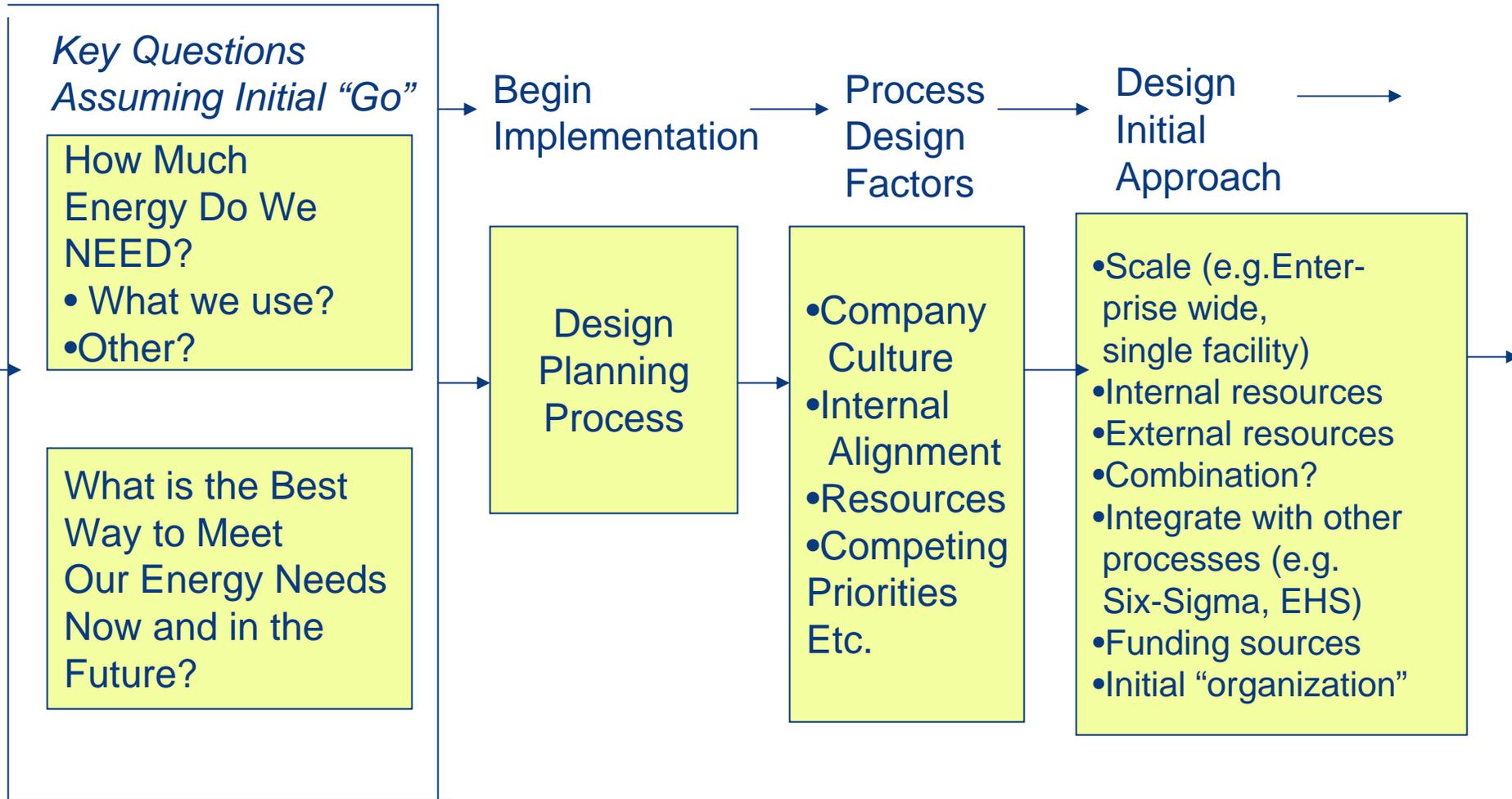
Energy Planning & Strategy Roadmap

Step 1- Initial Assessment



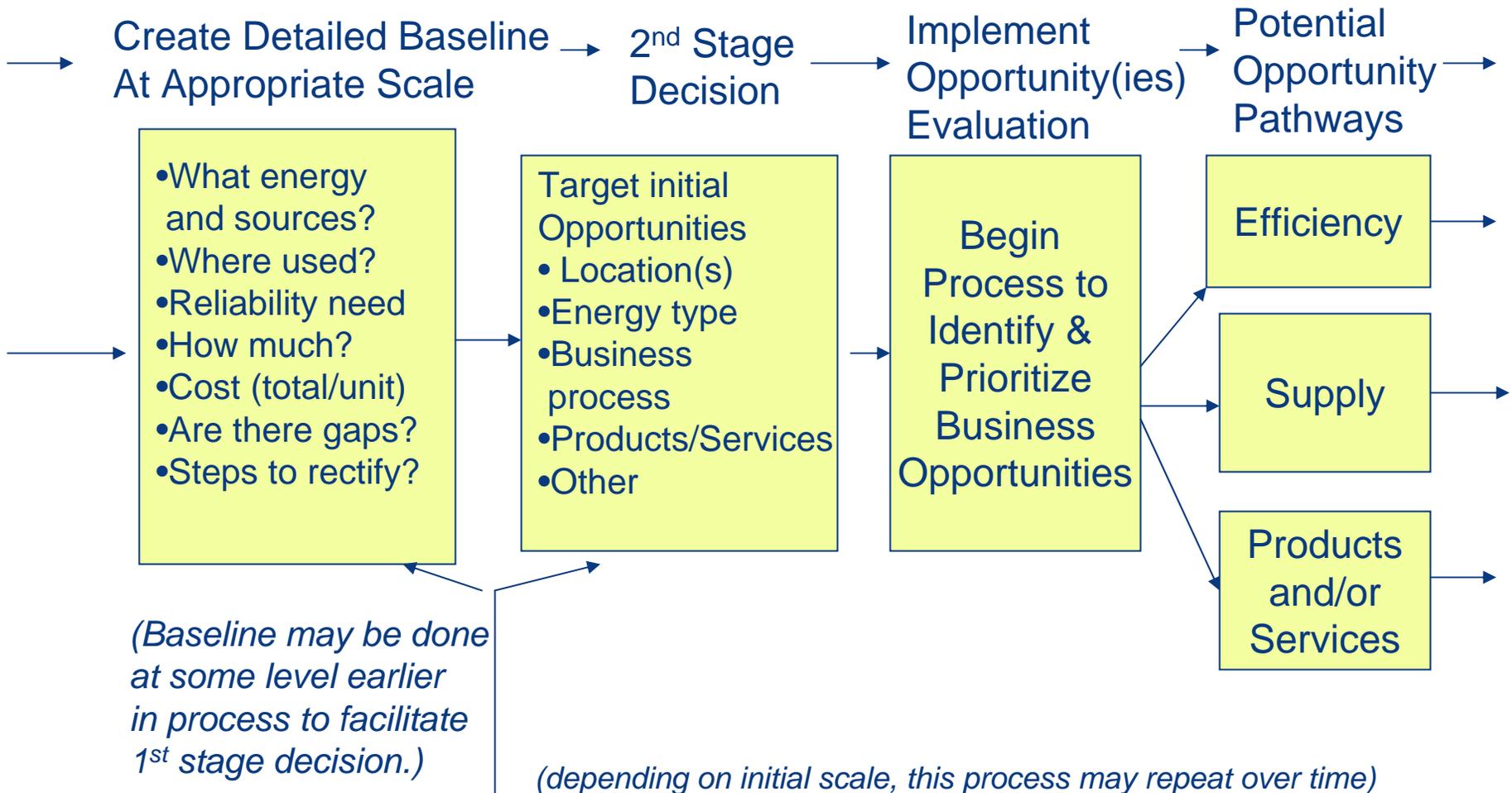
Energy Planning & Strategy Roadmap

Step 2- Design Process



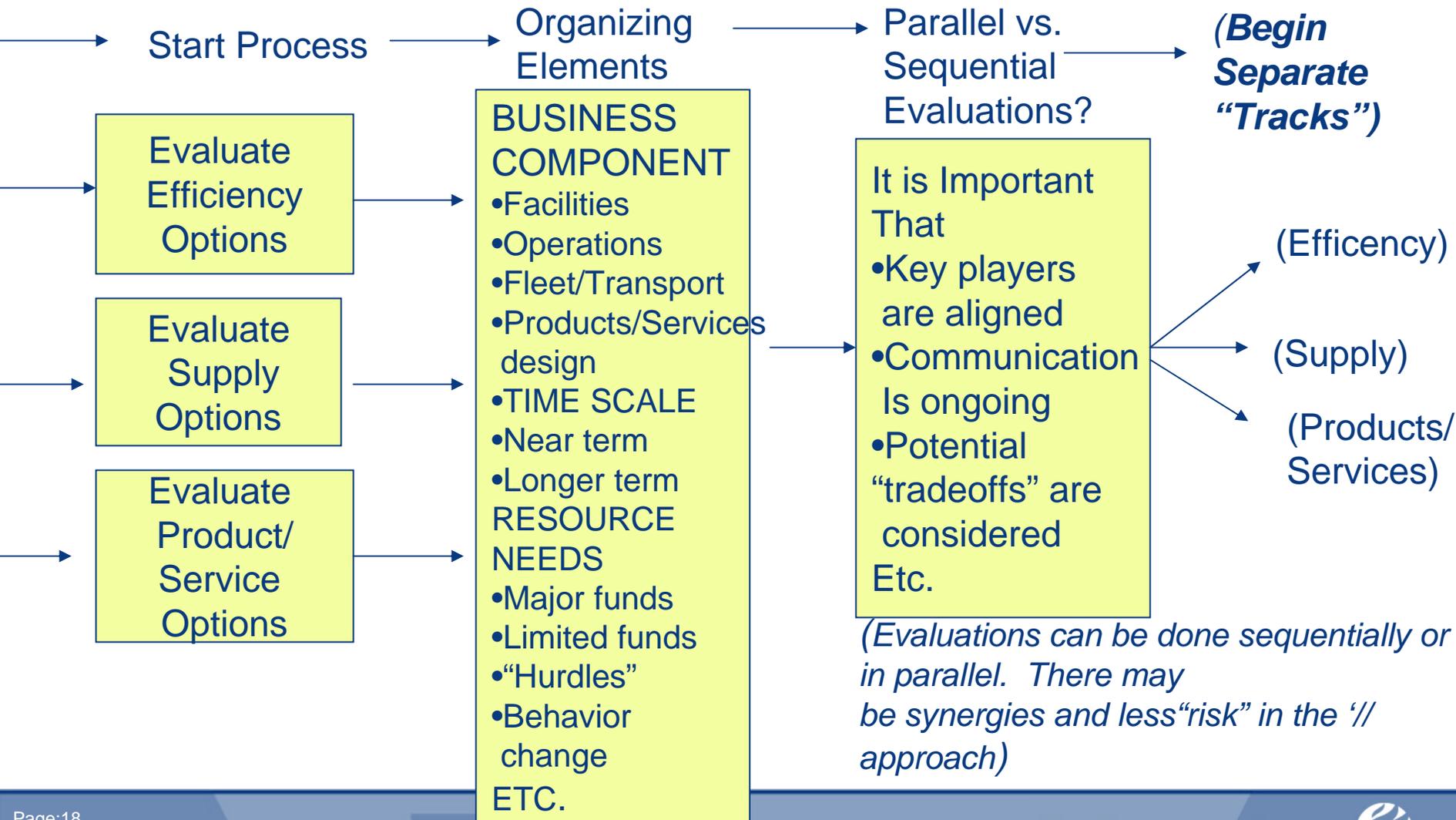
Energy Planning & Strategy Roadmap

Step 3- Evaluate Opportunities



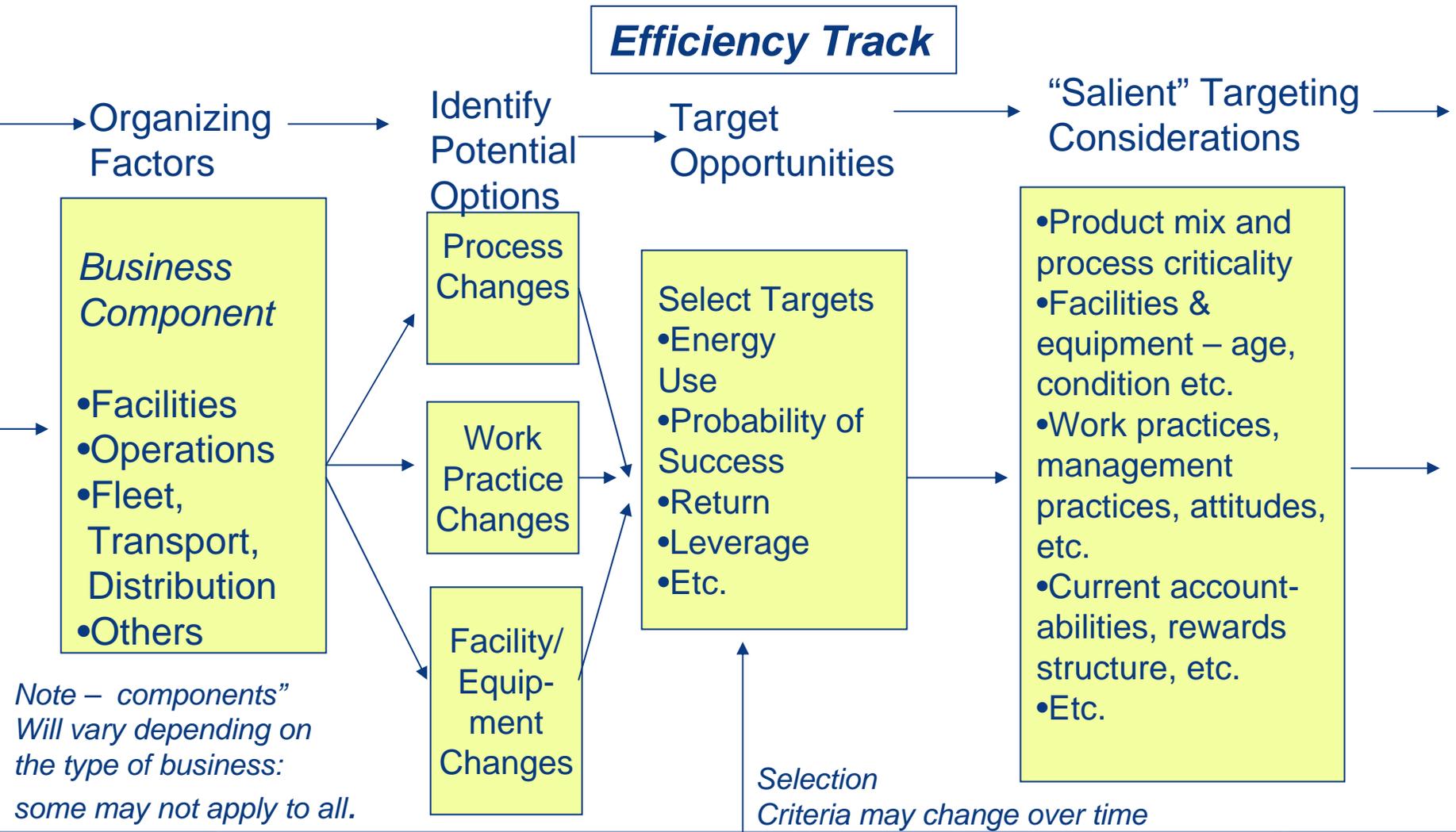
Energy Planning & Strategy Roadmap

Step 3- Evaluate Opportunities



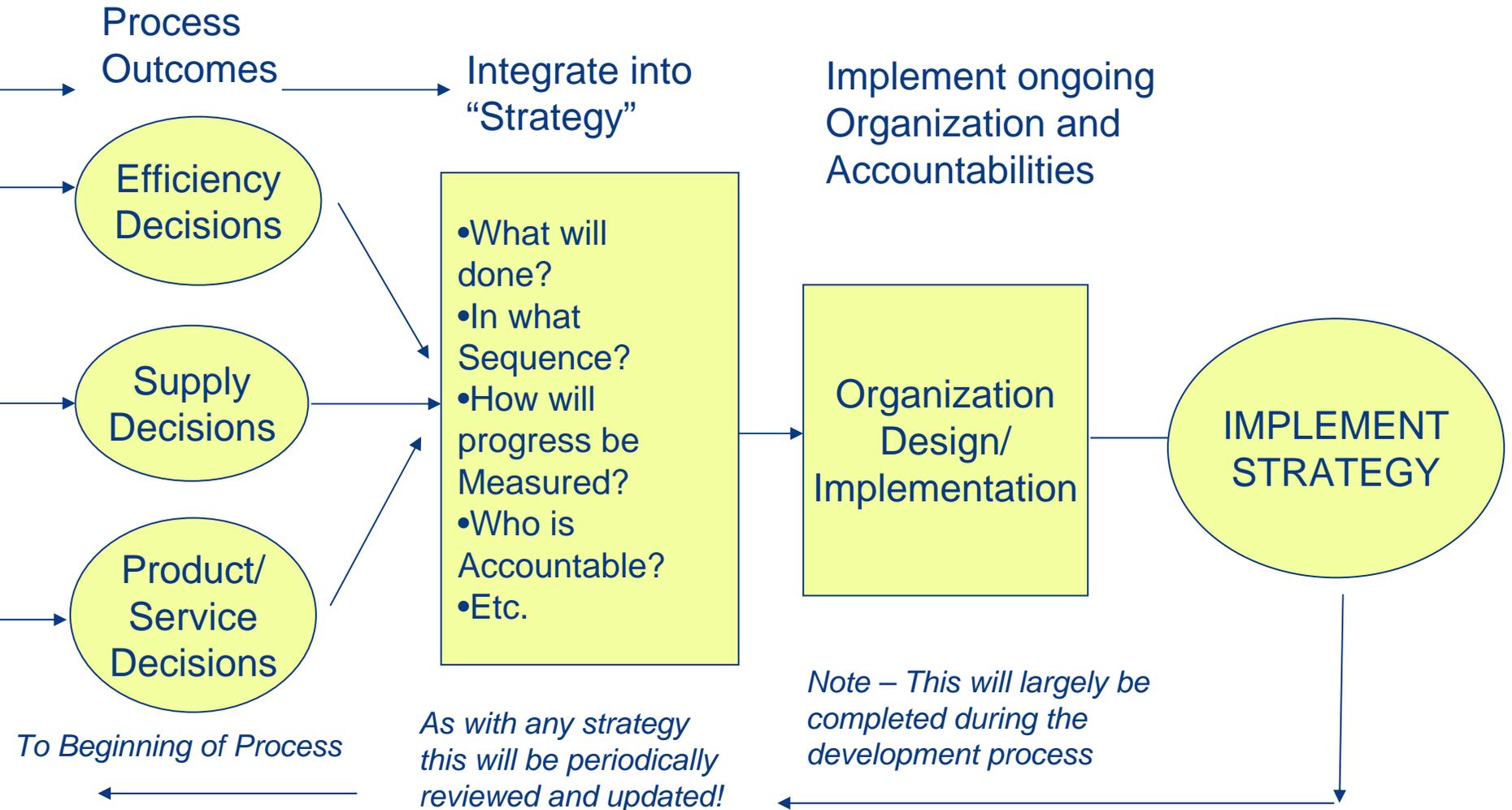
Energy Planning & Strategy Roadmap

Step 3- Evaluate Opportunities (sample)



Energy Planning & Strategy Roadmap

Step 4- Implementation



The Bottom Line: Strategic Energy Management for Sustainability

- **Energy is Essential to Business Success**
- **Sustainability is Essential to Our Future**
- **Energy is Essential to a Sustainable Future**
- **Business is a Major User (and Producer) of Energy**
- **Business Can and Will**
 - ◆ **Use Energy More Sustainably**
 - ◆ **Produce Products that will Enable Energy Sustainability**
 - ◆ **Develop More Sustainable Sources of Energy**
- **The Path for Achieving these Goals is Better Defined with the “Road Map”**
- **Getting There is still not Necessarily Easy!**

