Better Plants
U.S. DEPARTMENT OF ENERGY

Strategic Energy Management (SEM) with ISO 50001 and 50001 Ready

ORNL 50001 Ready Training Webinar Series, Session 8
March 8, 2021
10:00 a.m. to 12:30 p.m.

U.S. DEPARTMENT OF ENERGY

Agenda – Session EIGHT

- Welcome, Safety, and Housekeeping
- Today's Content: *Wrap Up and Next Steps*
  - Review of all 25 task for 50001 Ready
  - Remember to use the 50001 Ready navigator
  - Where can we go from here?
- Webinar Wrap Up
- Kahoot Quiz Game
- Q&A

But first, a POLL!

Better Buildings is an initiative of the U.S. Department of Energy

Polling Question 1

Polling Question

1) On a scale of one to five, how would you rate the value of this Better Plants training on 50001 Ready based energy management?
   A. FIVE – Excellent and we will apply most this
   B. FOUR – Very good and we plan to use some of this
   C. THREE – Okay, and we may implement a few things
   D. TWO – Not what I expected and limited value
   E. ONE – No value to my organization
   F. ZERO – "Why, oh why did I not take the BLUE pill?!?!"

Welcome

- Welcome to the Virtual INPLT *50001 Ready* webinar training series
- Eight, 2-1/2 hour webinars, focused on Strategic Energy Management (SEM), in general, and the ISO 50001 standard and *50001 Ready Navigator,* in particular
- The webinars will help you understand the why and how of SEM and the *50001 Ready Navigator* tool
- Thank you for your interest!

50001 Ready
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Safety and Housekeeping

- Please make sure that your surroundings are safe:
  - If you are driving, please use hands free mode
  - If you are in a building, be sure you know the exit paths
  - If you are at home, be sure there are no distractions
- You are welcome to ask questions at any time during the webinar
- When you are not asking a question, please MUTE your mic and this will provide the best sound quality for all participants
- We will be recording all these webinars and by staying on-line and attending the meeting you are giving your consent to be recorded
  - A link to the recorded webinars will be provided, afterwards

Our 50001 Ready Training Group

Better Plants U.S. DEPARTMENT OF ENERGY

DENSO

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- Today's Content

Review Tasks 1 - 25

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50001 Ready: Review Previous Tasks

Context of the Organization	Leadership	Planning	Support	Operation	Performance Evaluation	Improvement
1. An EnMS and your Organization 2. People and Legal Requirements 3. Scope and Boundaries	4. Management Commitment 5. Energy Policy 6. Energy Team and Resources	7. Risks to EnMS Success 8. Energy Data Collection and Analysis 9. Significant Energy Uses 10. Improvement Opportunities 11. Energy Performance Indicators (EnPIs) and Baselines (EnBs) 12. Objectives and Targets 13. Action Plans for Continual Improvement	14. Competence and Training 15. Awareness and Communication 16. Documenting the EnMS	17. Operational Controls 18. Energy Considerations in Design 19. Energy Considerations in Procurement	20. Monitoring and Measurement of the EnMS 21. Monitoring and Measurement of Energy Performance Improvement 22. Internal Audit 23. Management Review	24. Corrective Action 25. Continual Improvement

Building a foundation for your EnMS

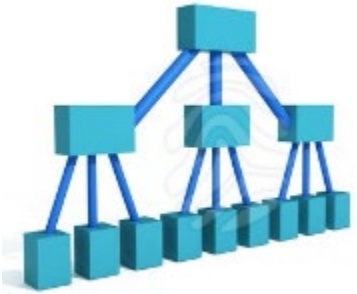
Regarding my EnMS, what are the:

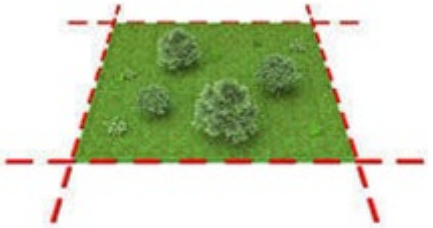
- *Risks, opportunities and strategic issues;*
- *Legal and other requirements;*
- *Interested parties;*
- *Scope and boundaries?*

Section 1: Context of the Organization

Section 1: Context of the Organization

Task 1	**An EnMS and Your Organization**	We determine the strategic issues that affect our ability to improve energy performance and achieve the goals of our 50001 Ready energy management system.
Task 2	**People and Legal Requirements Affecting the EnMS**	We determine the interested parties and energy-related legal and other requirements relevant to our energy performance and the energy management system. At defined intervals, we review these requirements and evaluate our compliance with them.
Task 3	**Scope and Boundaries**	We have documented and approved the scope and boundaries of our 50001 Ready energy management system.

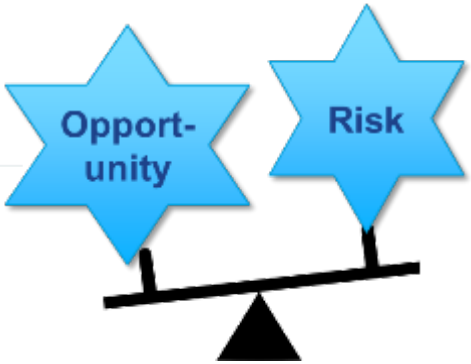




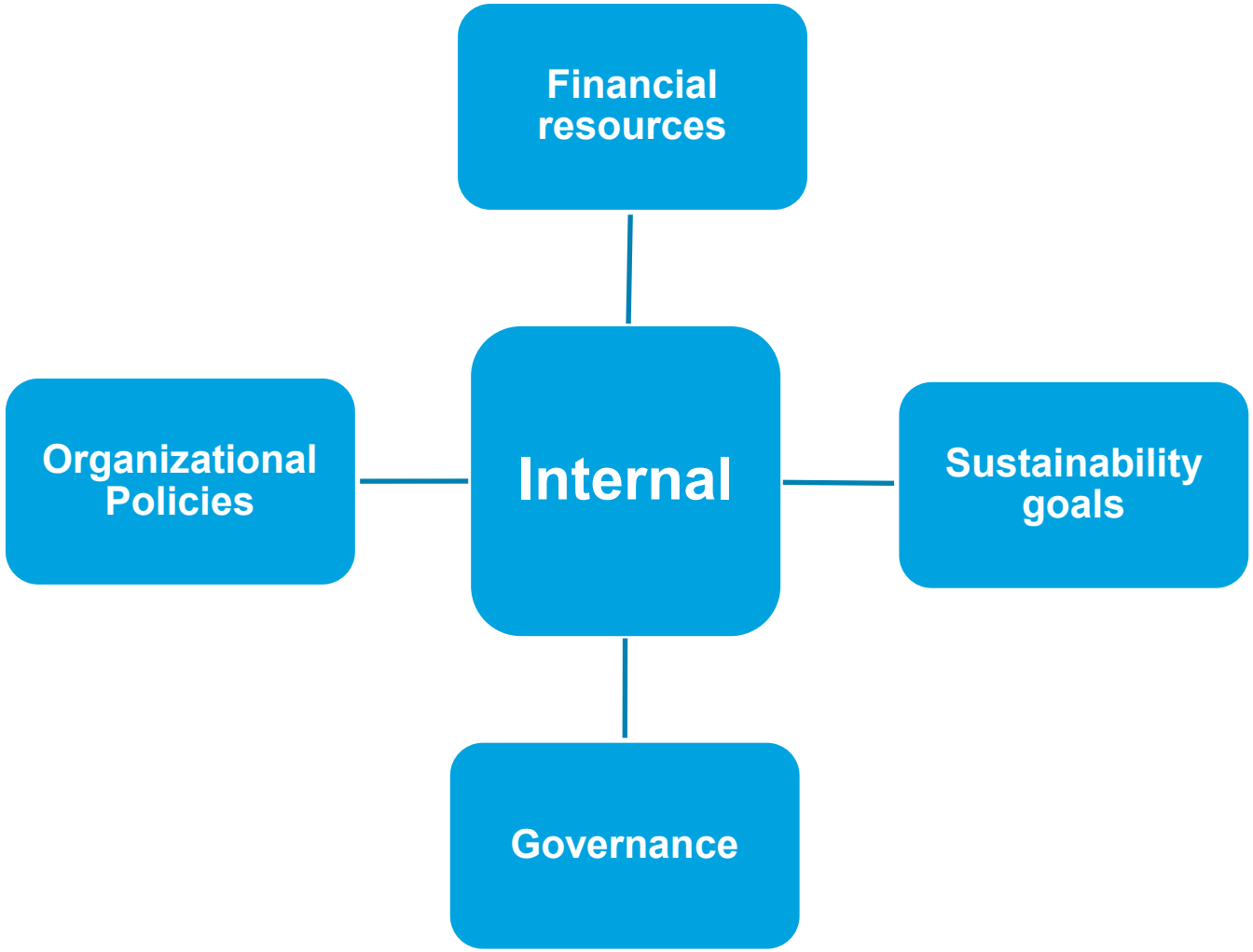
Section 3: Planning

Section 3: Planning

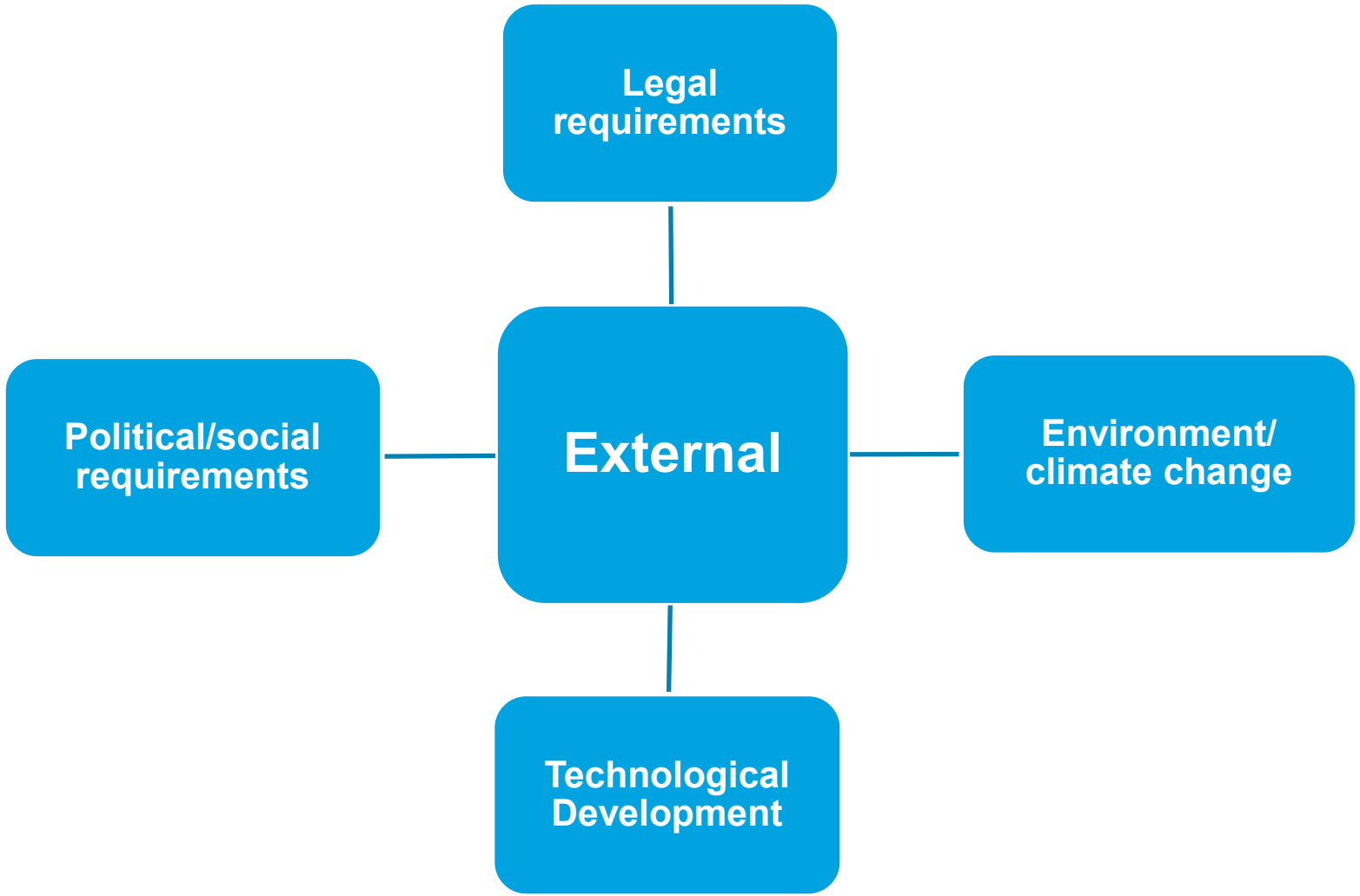
Task 7	**Risks to EnMS Success**	We determine strategic risks and opportunities to ensure that our organization can achieve the intended outcomes of our energy management system and energy performance improvement. We plan and implement actions to address these risks and opportunities and evaluate the effectiveness of the actions taken.



Task 1: Internal Issues



Task 1: External Issues

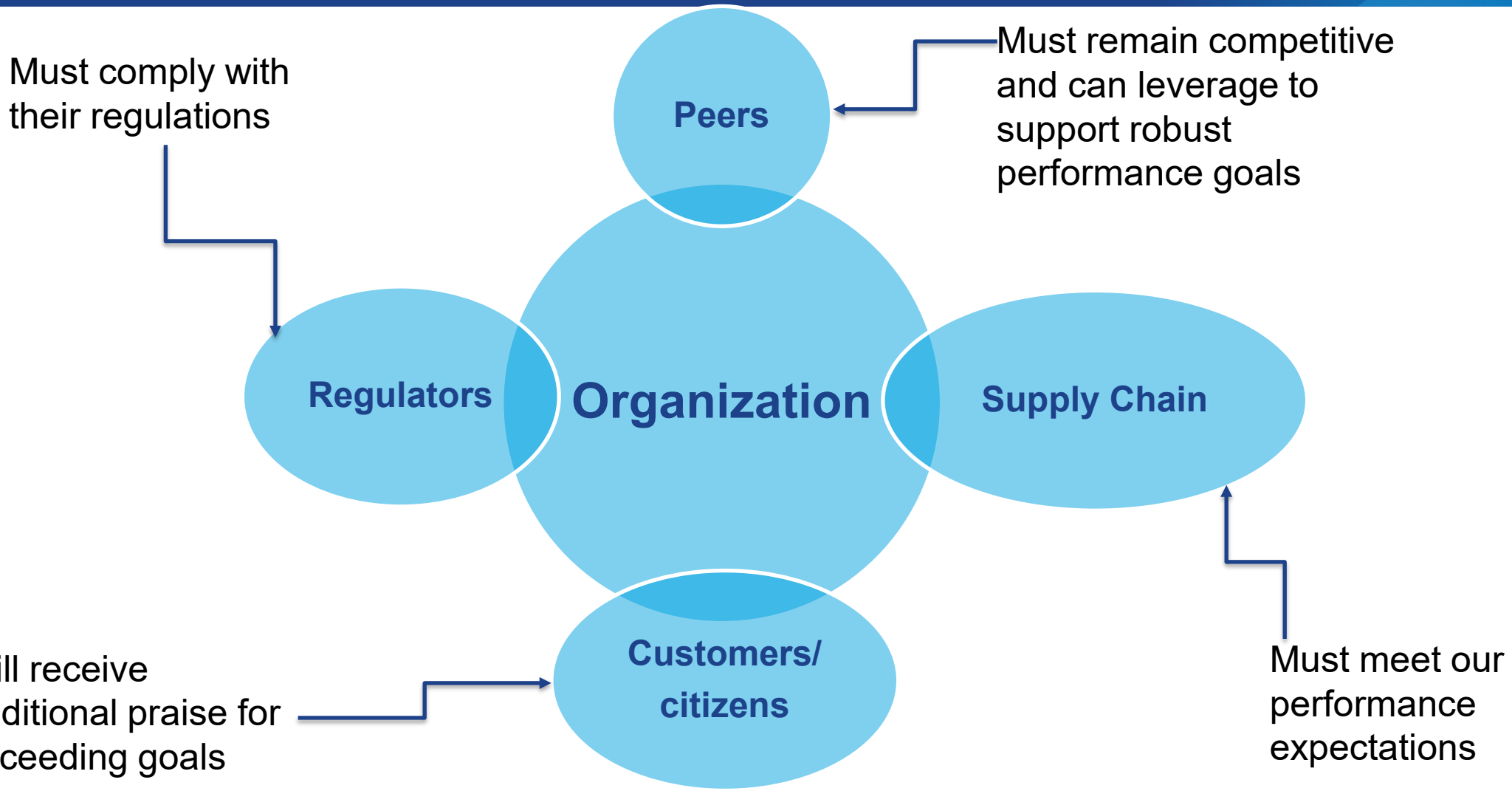


Task 7: Key Terms

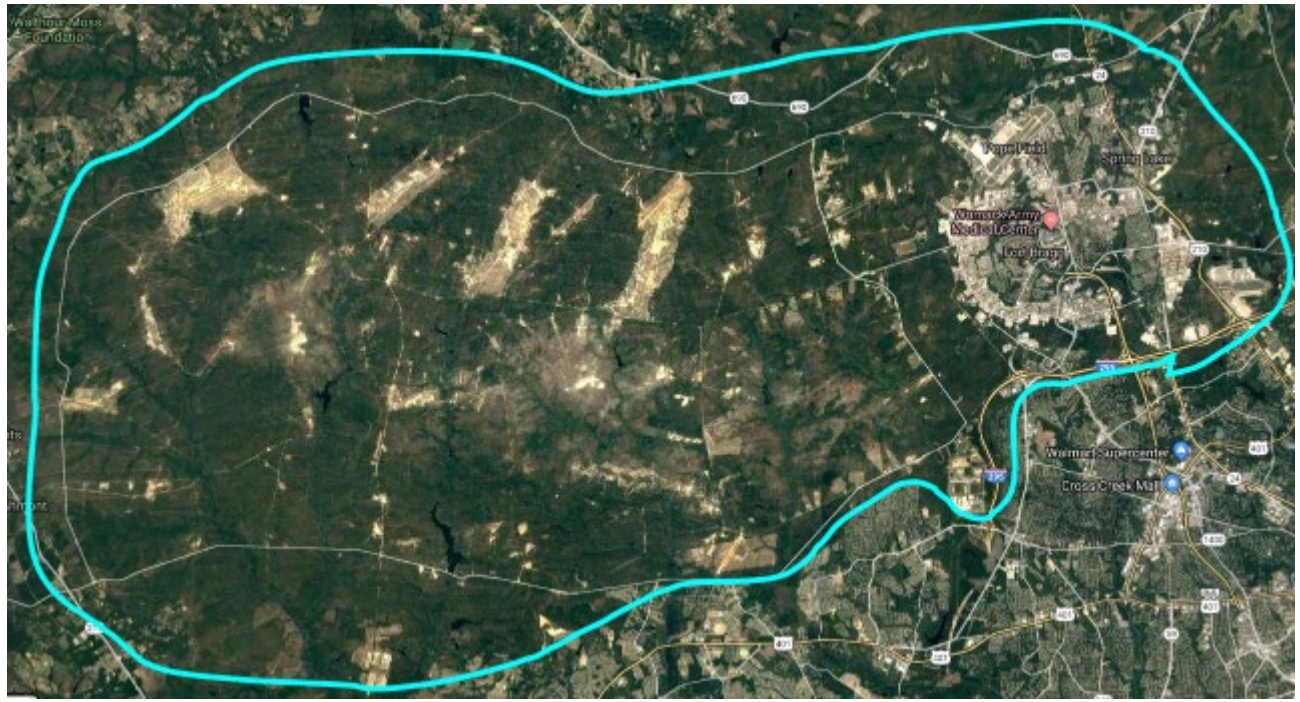
- Risk: Something that poses a threat
- Opportunity: Something that has the potential for a positive impact

The Energy Team defines methods for identifying and assessing these items

Task 2: Interested Parties, Plus Requirements



Task 3: Scope and Boundaries



Section 2: Leadership (Task 4 - 6)

Commitment and guidance from the top

Is there strong top management commitment to the EnMS?
Is there a clear and well-communicated energy policy?
Are there adequate resources for the energy team to carry out the implementation of the EnMS?

Section 2: Leadership

Section 2: Leadership

Task 4	**Management Commitment**	Our top management demonstrates leadership and commitment to continual improvement of energy performance and the effectiveness of the 50001 Ready system.
Task 5	**Energy Policy**	We have an energy policy statement, which has been approved by top management and communicated across the organization.
Task 6	**Energy Team and Resources**	We have an energy team authorized by top management to oversee the energy management system. Responsibilities and authorities are assigned and communicated, and processes are in place to identify and provide resources.

Task 4: Questions to Ask

- Where does top management reside?
  - At an individual sites?
  - At a central office?
  - At a level above the central office?
- Who sets the energy policy?
- Who will do the management review?
- Who will establish and confirm management commitment?
  - Use the 50001 Ready Navigator Task 4 playbook resource

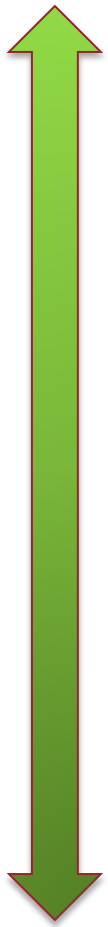
Task 4: Management Responsibility

- ✓ Ensure that scope and boundaries are established
- ✓ Ensure the energy policy and objectives and targets are established
- ✓ Ensure integration of EnMS requirements into business process.
- ✓ Ensures that actions plans are approved and implemented
- ✓ Ensure adequate resources are available
- ✓ Communicate the importance of effective energy management and conforming to EnMS requirements
- ✓ Ensure the EnMS achieves intended outcomes
- ✓ Promote continual improvement of energy performance and the EnMS
- ✓ Ensure the formation of the energy team
- ✓ Direct and support persons to contribute to the effectiveness of the EnMS and energy performance improvement
- ✓ Support other management roles to demonstrate leadership
- ✓ Ensure that EnPI(s) appropriately represent energy performance
- ✓ Ensure that processes are established and implemented to identify and address changes affecting the EnMS and energy performance

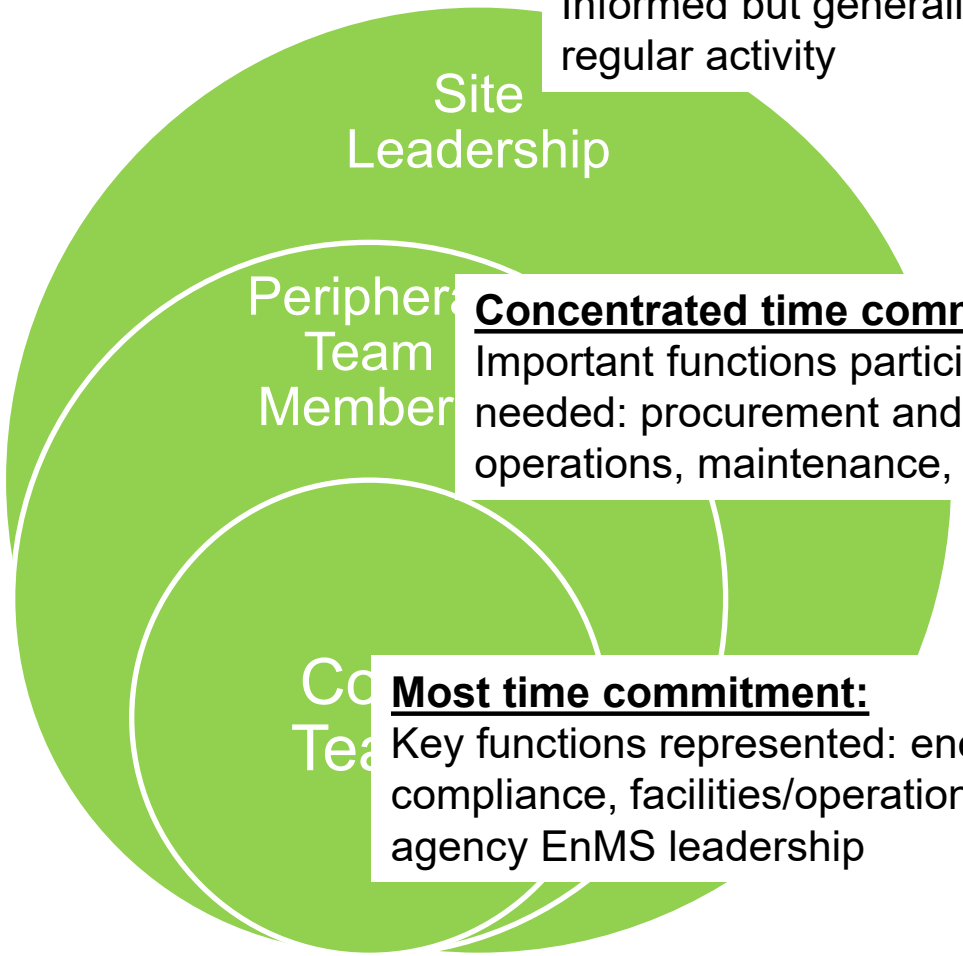
Task 5: Energy Policy Requirements

- Is appropriate to the purpose of the organization
- Provides a framework for setting and reviewing objectives and energy targets
- Includes a commitment to ensure the availability of information and necessary resources to achieve objectives and energy targets
- Includes a commitment to satisfy applicable legal requirements and other requirements
- Includes a commitment to continual improvement of energy performance and the EnMS
- Supports the procurement of energy efficient products and services that impact energy performance
- Supports design activities that consider energy performance improvement.

Task 6: Energy Team Roles and Time Commitment



Where does the central office fit in?



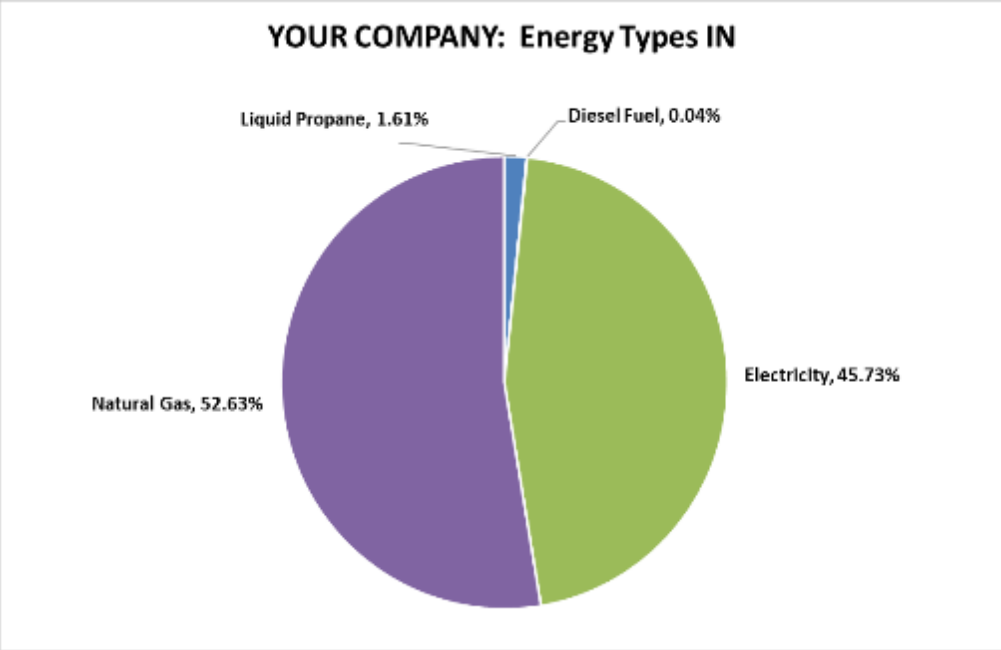
Least time commitment:
Informed but generally removed from regular activity

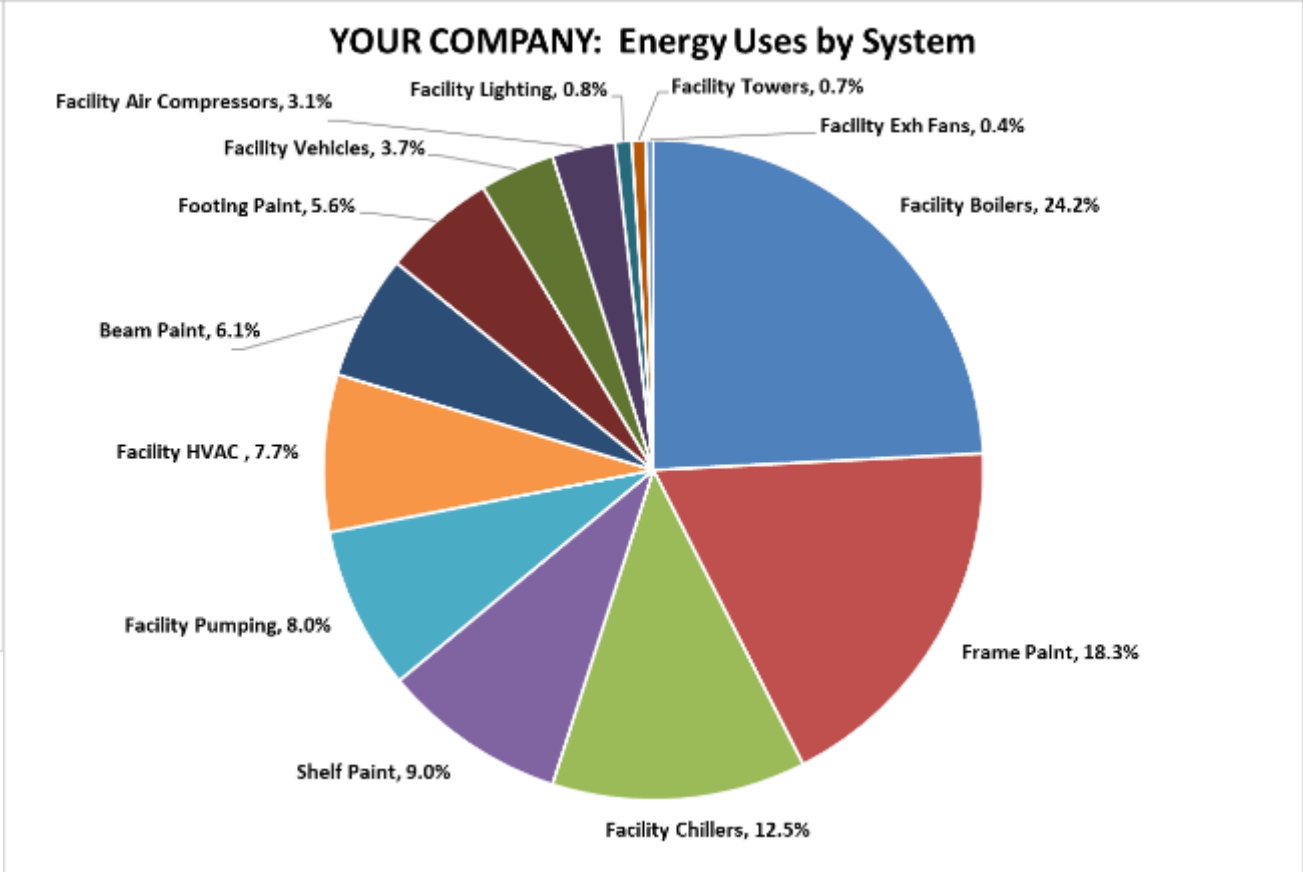
Concentrated time commitment:
Important functions participate from time to time as needed: procurement and design, communications, operations, maintenance, IT, etc.

Most time commitment:
Key functions represented: energy management, compliance, facilities/operations, maintenance, agency EnMS leadership

Section 3: Planning (Tasks 7-13) – Two Key Pies

Understanding your energy performance





What energy comes into my site?
Where does all this energy go? [SEUs]
What are my EnPIs and EnBs?
What are my objectives, energy targets & action plans?

Section 3: Planning

Section 3: Planning (already did Task 7)

Task 8	**Energy Data Collection and Analysis**	We identify our energy sources and energy uses, have a data collection plan in place, and collect related energy and relevant variable data. We ensure the accuracy and repeatability of measurements. We analyze our energy use and consumption data.
Task 9	**Significant Energy Uses (SEUs)**	We determine our significant energy uses (SEUs), identify and monitor their relevant variables and energy performance, and identify the persons that affect the SEUs. We have a process to review and update SEU data and related information, including our methods and criteria to determine that an energy use should be an SEU.

Task 8: Key Terms

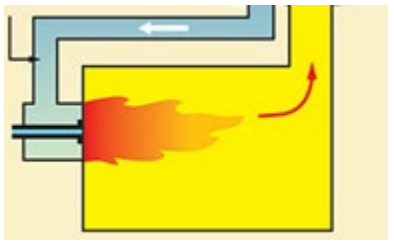
- Energy Source
  - Electricity, natural gas, fuel oil, diesel fuel, liquid propane, renewables, etc.



- Energy Use (or user)
  - Machinery, equipment, processes: Boiler, chiller, fan, pump, lighting, air compressor, paint booth, air handling unit, motors, etc.



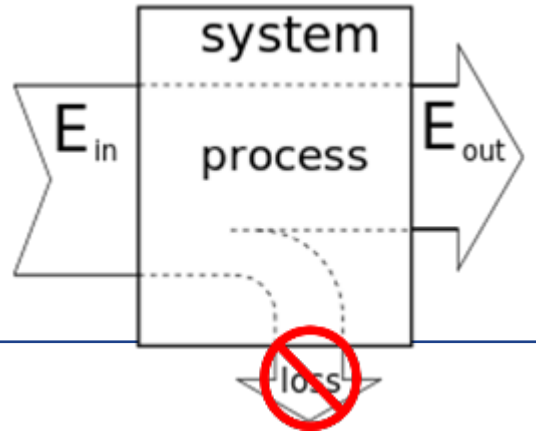




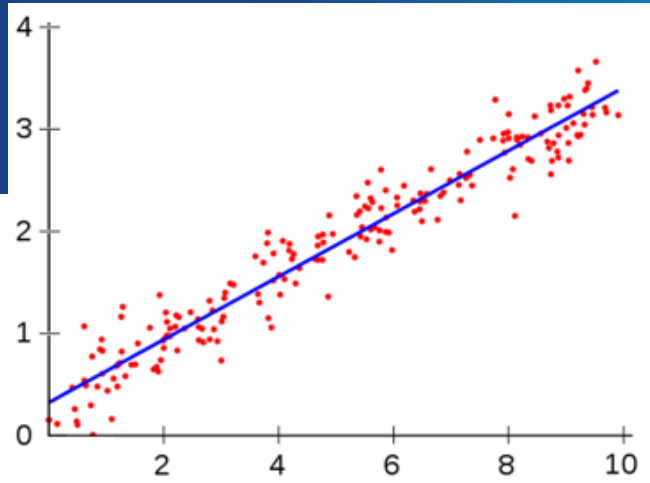
Task 8: Key Terms (continued)

- Energy Consumption
  - A quantity of energy: kilowatt hours, dekatherms, gallons, MMBTUs, etc.

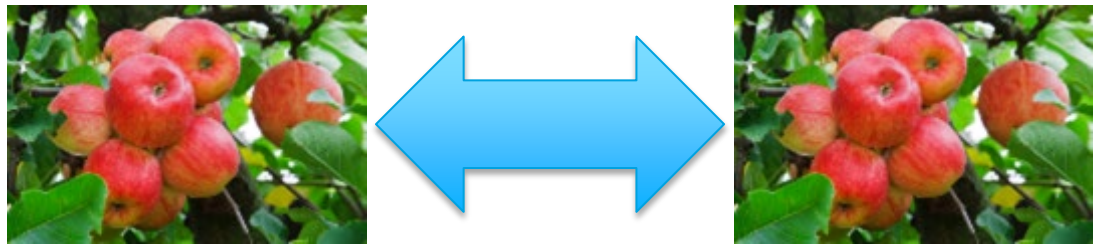
- Energy Efficiency
  - A ratio of energy output to energy input, typically expressed as a percentage



Task 8: More Key Terms

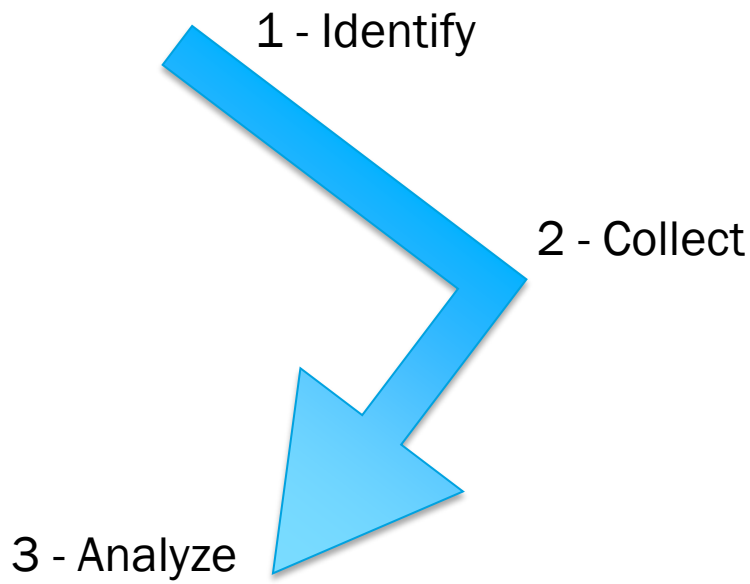


- Relevant Variables
  - Impacts energy performance, i.e., relevant
  - Typically changes, i.e., variable
  - Examples: weather conditions (heating degree days, cooling degree days, average outside temperature, humidity, working hours, occupancy, production output, etc.)
- Normalization
  - Allows for comparison of apples to apples
  - Accounts for changes so that you can properly compare energy performance to energy baselines



Task 8: Delegating Roles

- Types of data needed
  - Total energy consumption for all sources
  - Energy consumption by users
  - Square footage & occupancy
  - Relevant variables
  - Product volumes

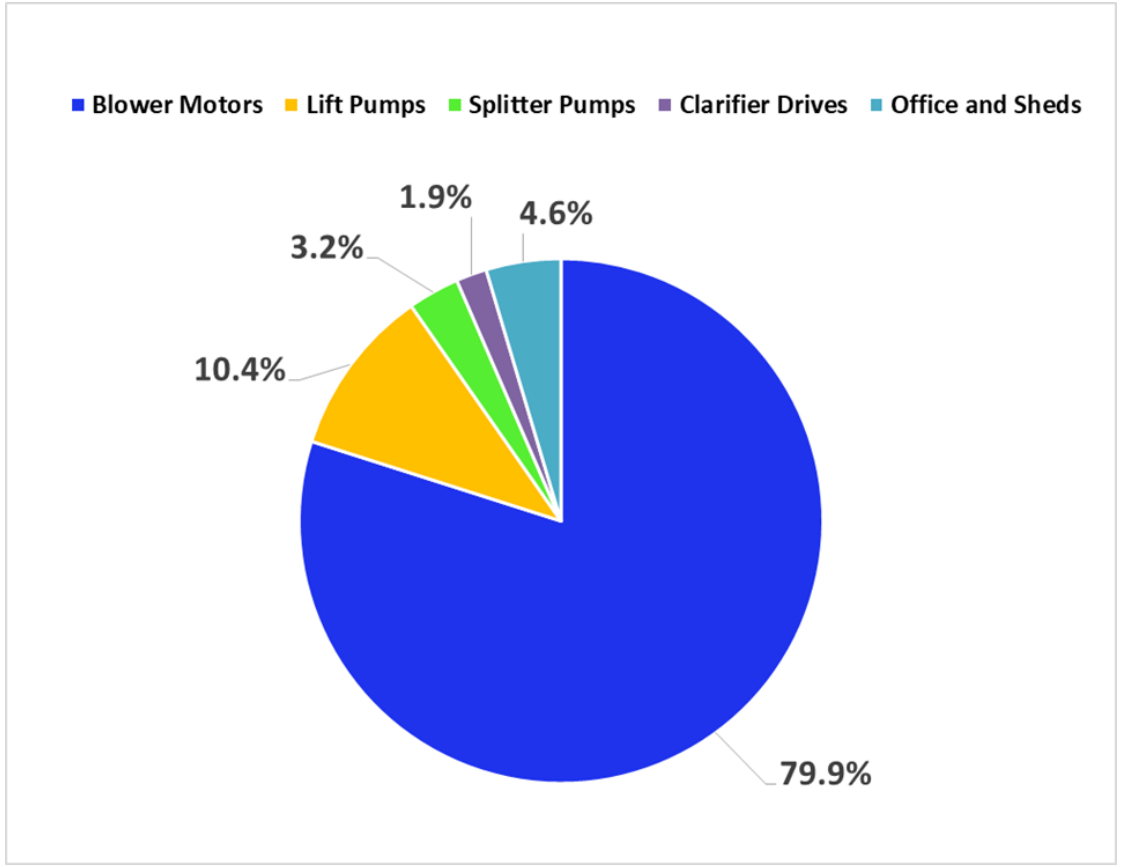


- Sources of data
  - Utility bills
  - Sub-metering
  - Site floor plans
  - Weather data
  - Process flow charts
  - Production data
  - End user equipment specs

Who will be responsible for attaining this information?
Who will be responsible for cleaning/analyzing the data?
Where will we store the data?
What is our naming convention to avoid misunderstandings about most current information?

Task 9: Key Terms

- Significance is determined by your organization



1) SEUs can be facilities, systems, processes, or equipment.
2) SEUs – Consider consumption AND opportunity for improvement

Task 9: SEUs Require Lots of Work

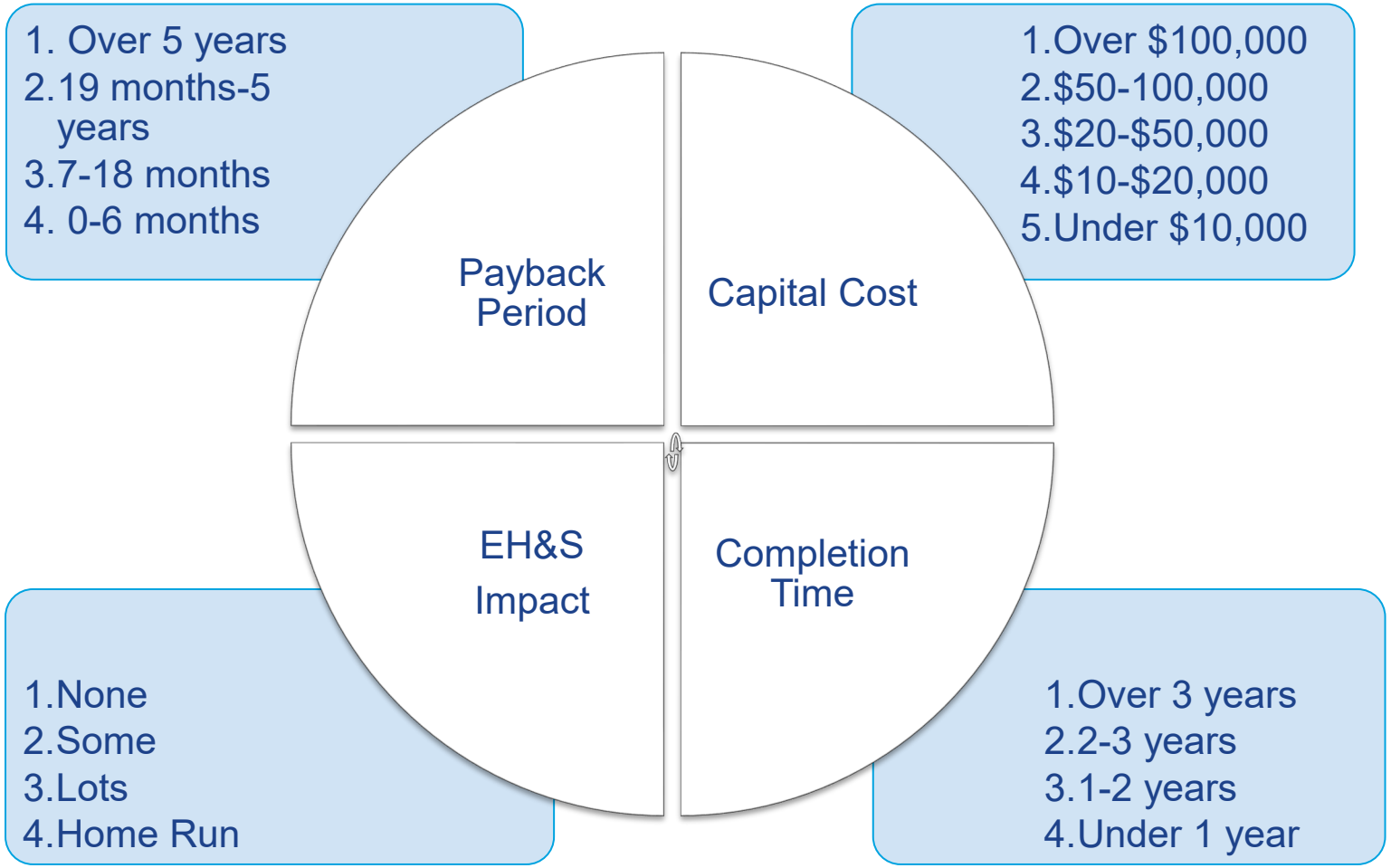
- Each selected SEU will require work in these areas:
  - Task 12, ISO section 6.2.2 Objectives and energy targets
  - Tasks 8 & 9, ISO section 6.3 Energy review (3x)
  - Task 8, ISO section 6.6 Planning for collection of energy data (3x)
  - Task 17, ISO section 8.1 Operational planning and control (2x)
    - This entire section is focused on SEUs
  - Task 19, ISO section 8.3 Procurement
  - Task 20 & 21, ISO section 9.1 Monitoring, measuring, analysis and evaluation of energy performance, General
    - Must include the operation of SEUs

There are at least 11 things to do for each selected SEU!!

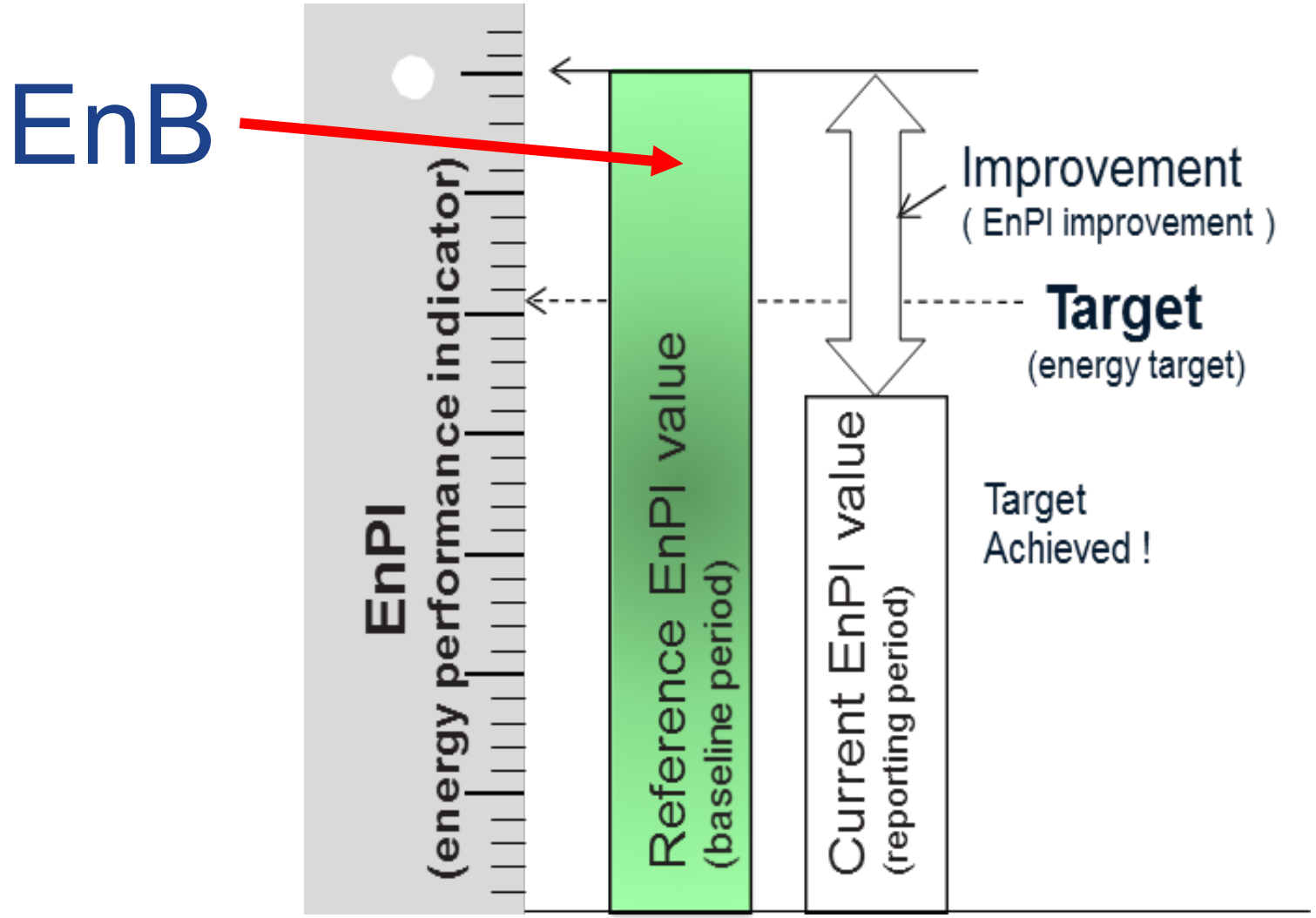
Section 3: Planning (continued)

Task 10	**Improvement Opportunities**	We identify and prioritize energy performance improvement opportunities and have processes in place to update them.
Task 11	**Energy Performance Indicators (EnPIs) and Baselines (EnBs)**	We identify energy performance indicators and energy baselines to measure and monitor our energy performance and to demonstrate energy performance improvement. We have a methodology for determining and updating them.
Task 12	**Objectives and Targets**	We establish objectives and energy performance targets.
Task 13	**Action Plans for Continual Improvement**	We develop action plans and implement improvement projects to achieve our objectives and energy targets.

Task 10: Example of Ranking Criteria

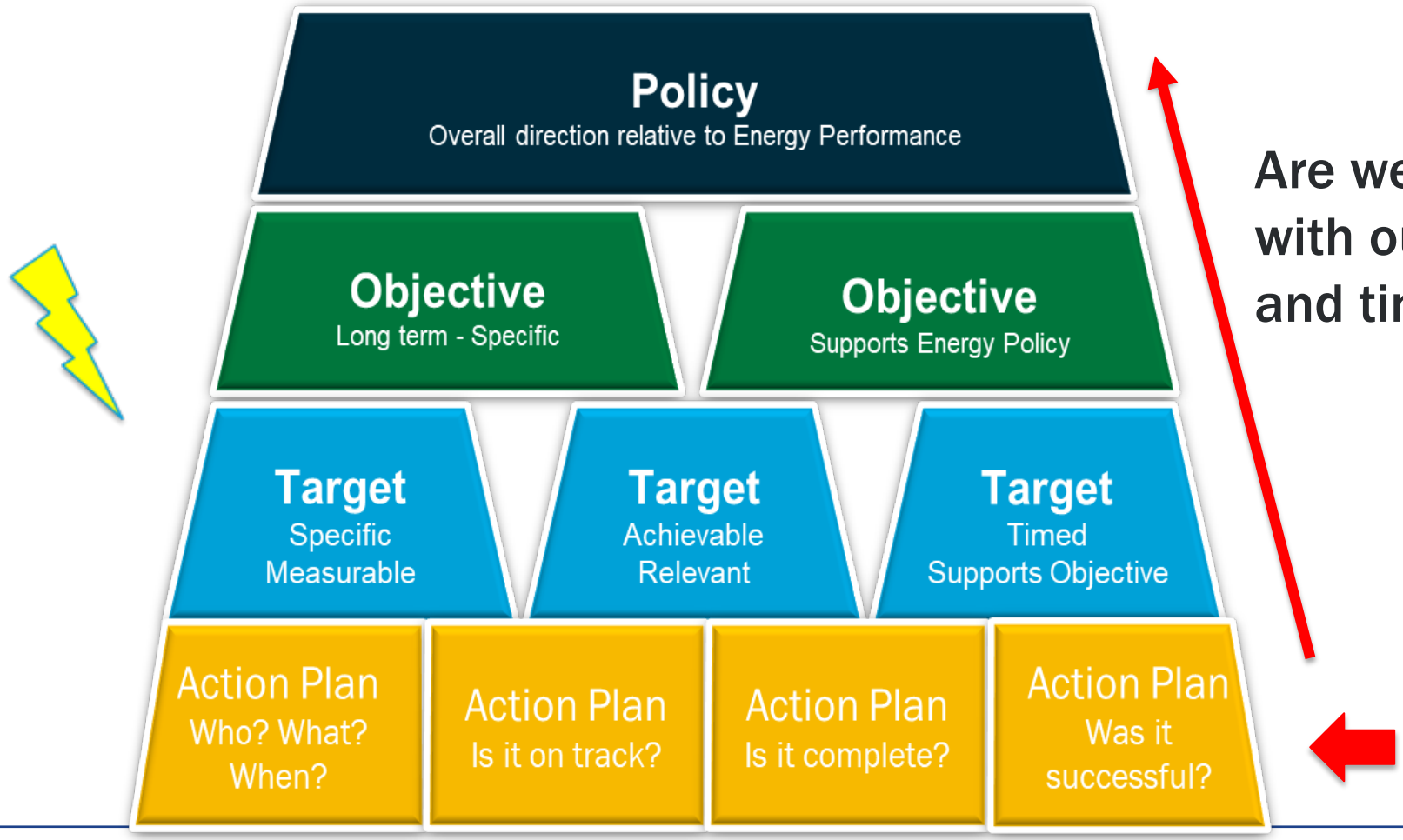


Task 11: EnPIs Relative to EnBs



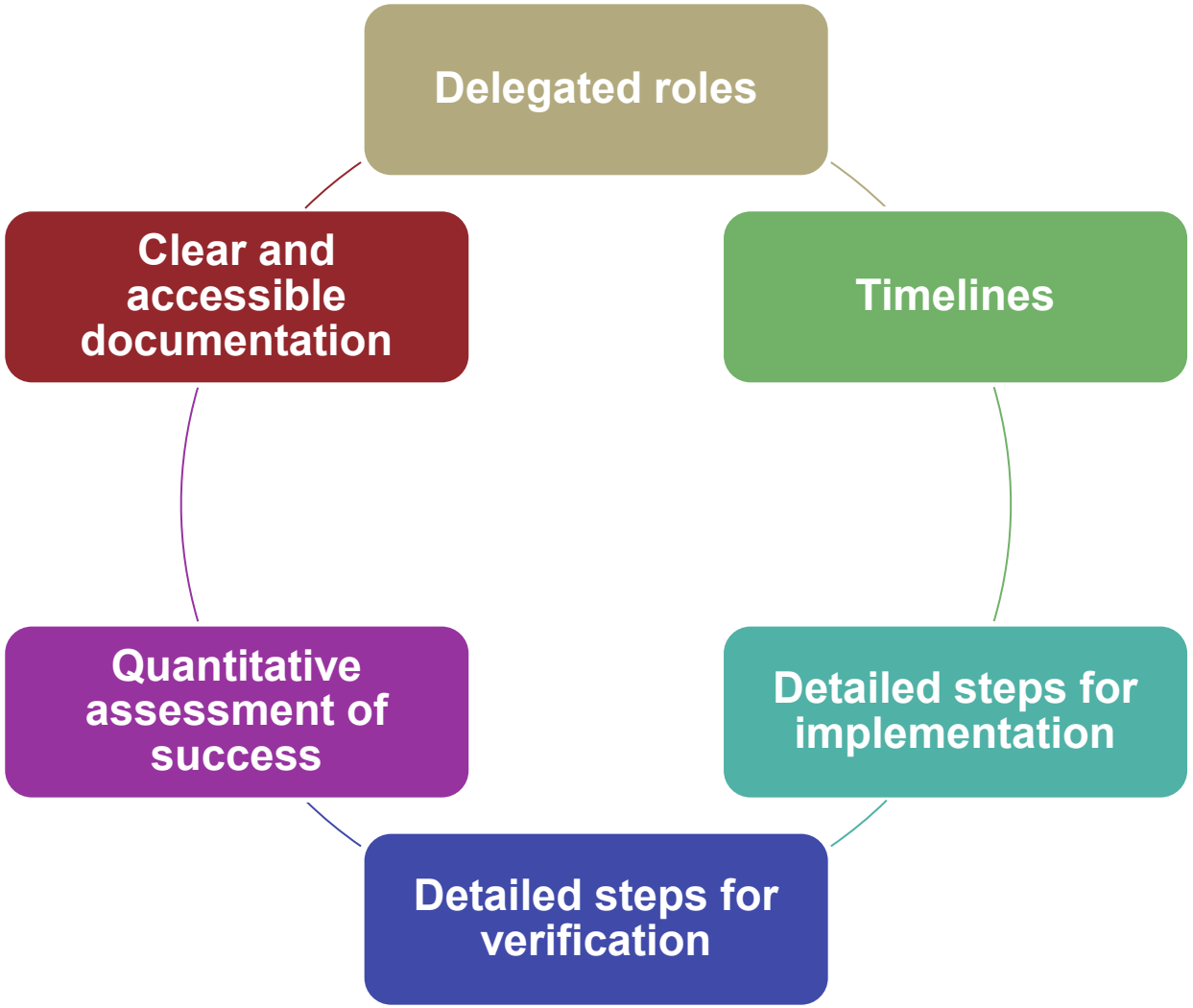
Task 12 & 13: Building the Pyramid

Planning our energy improvement pyramid:



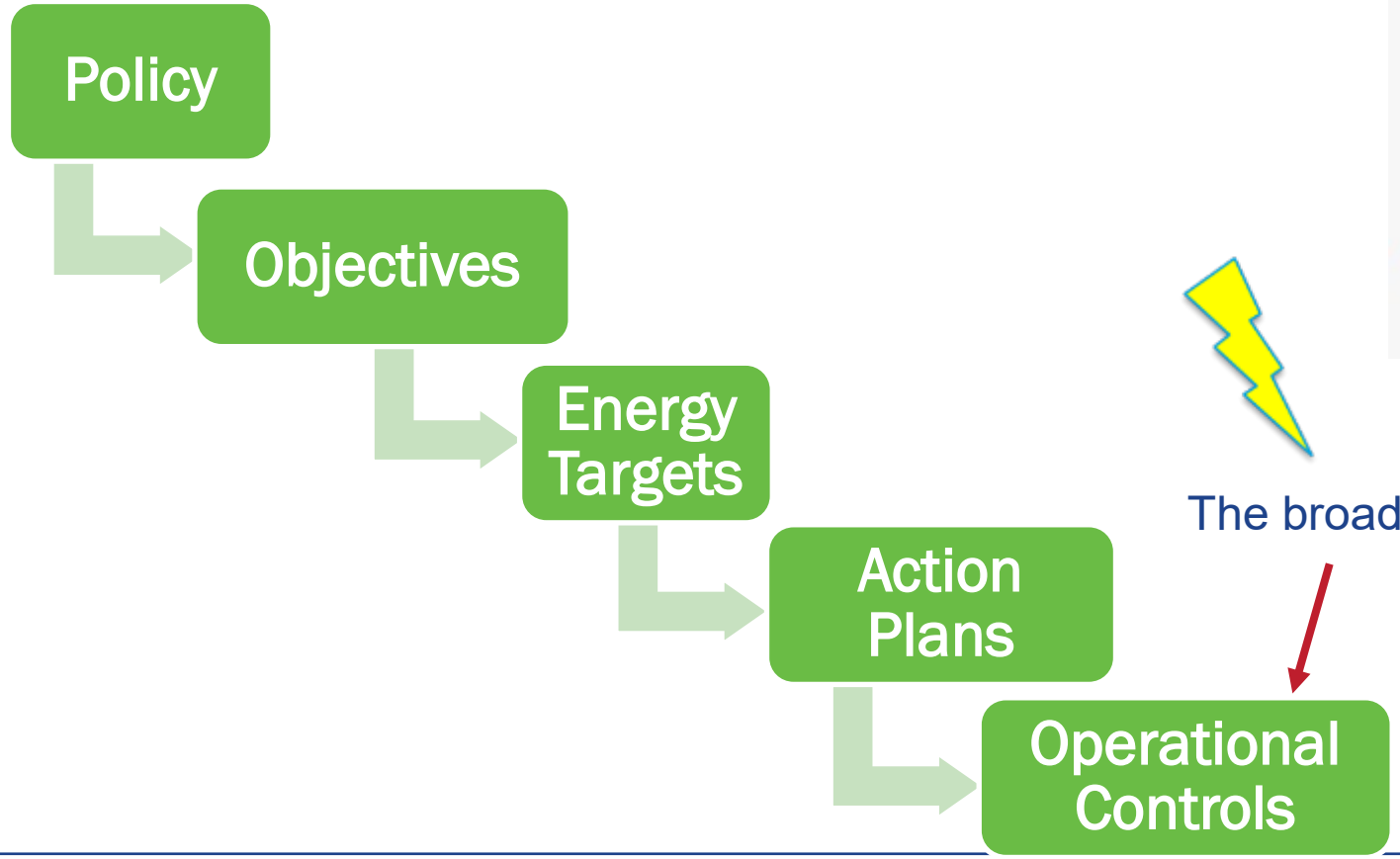
Are we on track with our goals and timelines?

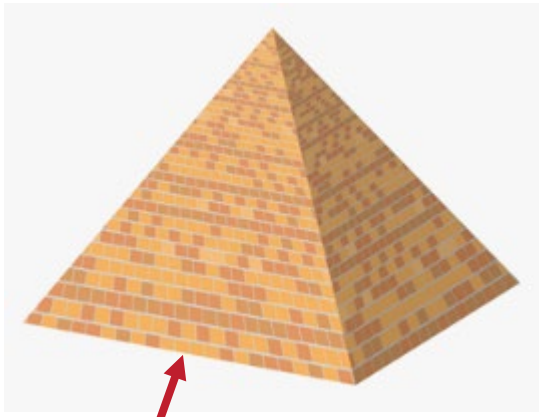
Task 13: What makes a robust action plan?



Tasks 10 - 13: The Big Picture

- Building the energy success pyramid starts with a wide base of small actions that build to the completion of energy policy





The broad base

Section 4: Support (Tasks 14 – 16)

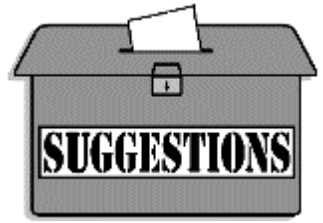
Ensure all team members who impact energy performance understand their role

Who impacts energy performance and our EnMS?
Are they aware, competent, trained, documented?
Is our training for them effective?
Do we maintain good documentation and records of our EnMS?

Section 4: Support

Section 4: Support

Task 14	**Competence and Training**	We ensure the competence of personnel whose work affects our energy performance and energy management system. We evaluate the effectiveness of actions taken to acquire competencies. We retain appropriate records of competencies and training.
Task 15	**Awareness and Communication**	Our personnel and on-site contractors are aware of our energy policy and their energy-related roles and responsibilities. We have processes in place for internal and any applicable external energy management system communications.
Task 16	**Documenting the EnMS**	We document information we determined is needed to ensure energy management system effectiveness and demonstrate energy performance improvement, as well as that suggested by the guidance of the 50001 Ready Navigator. We have processes in place for creating, updating, and controlling our documented information.



Think Missouri… The "Show Me" State

Task 14: Who Needs Competence

- Boiler Technicians
- HVAC Technicians
- Process Operators
- Energy team members
- Data collectors
- Others

Task 15: Communications Are Ongoing

Ongoing Communication Topics:

- Energy policy
- Importance of energy management
- Energy management responsibilities and authorities
- Energy objectives
- Energy performance successes

GET INPUT:

Have a method or system to get input on the EnMS from employees and contractors.

Task 16: Key Terms

Document:

Information that guides action or communicates expectations

Record:

Captures activities performed as evidence of the activity

3.3.5

documented information

information required to be controlled and maintained by an organization (3.1.1) and the medium on which it is contained

Task 16: Documentation

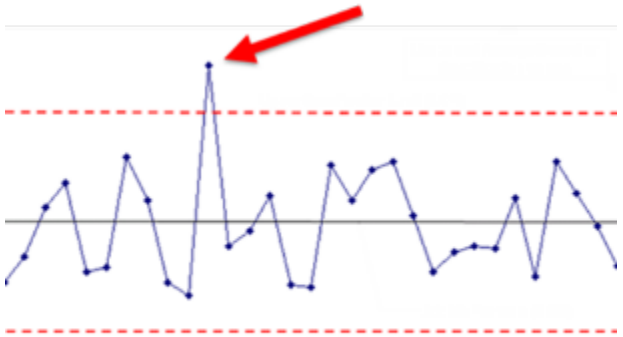
- ISO 50001 tells you what needs to be documented
- The new term is:
  - DOCUMENTED INFORMATION

This appears 18 times in the ISO 50001 standard:

...shall retain documented information (see 7.5)...

Section 5: Operation (Tasks 17 – 19)

Operate, maintain, design and procure to optimize energy performance



Do I have good operational and maintenance controls for my SEUs and action plans?
Do my operators know what to do when energy expectations are not met?
Are design and procurement teams are engaged?

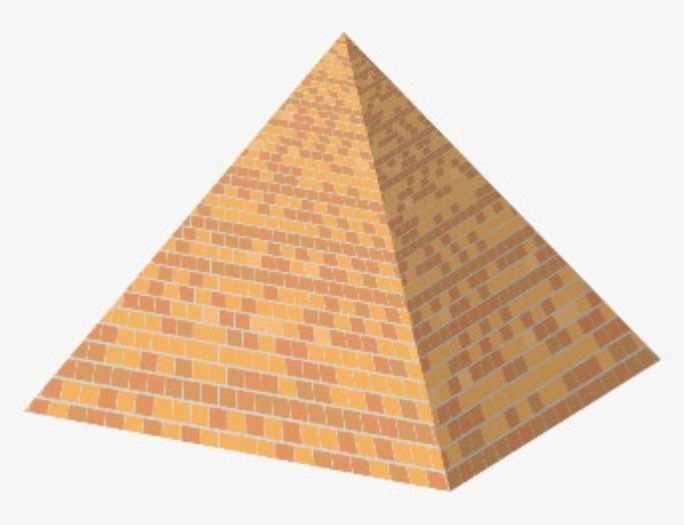
Section 5: Operation

Section 5: Operation

Task	Operational Controls
17	

We plan and control the processes related to our significant energy uses (SEUs) and action plans and set operation and maintenance criteria where there are risks of significant deviations in energy performance.

We operate the SEU and action-plan related processes in accordance with the criteria and communicate the criteria to relevant personnel. We control planned changes, along with outsourced processes related to SEUs.



Section 5: Operation (continued)

Section 5: Operation

Task 18	**Energy Considerations in Design**	We consider energy performance improvement opportunities and operational controls when designing new, modified, or renovated sites, equipment, systems, and processes.

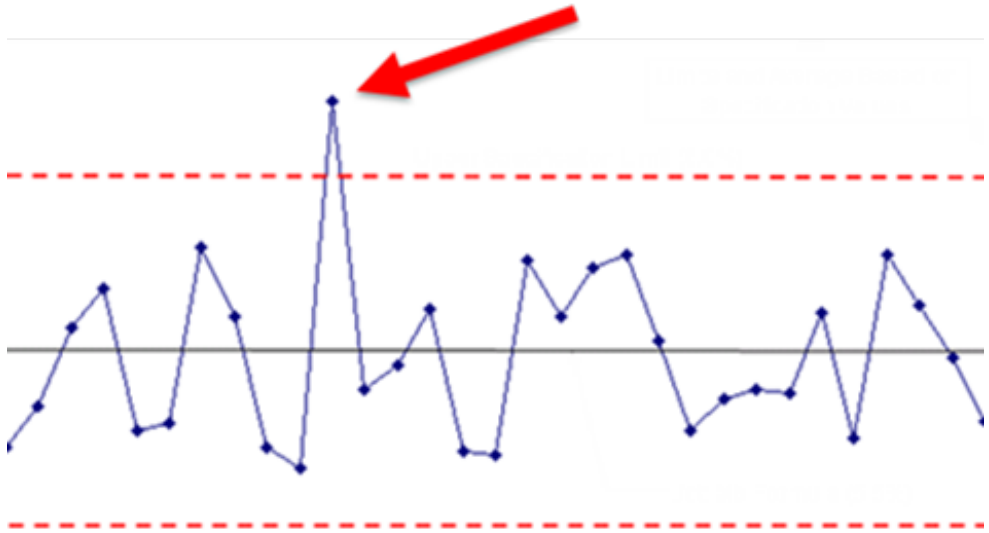
Task 19	**Energy Considerations in Procurement**	We establish energy performance criteria spanning the operating life for purchases affecting energy performance, inform suppliers that this is a factor in procurement, and define and use specifications for energy supply purchases.

Task 17: Determining Appropriate Controls

1. Document all current official operating practices for each SEU.

2. Map processes that use SEUs or have related action plans for improvement.

3. Identify opportunities for streamlining SEU controls.

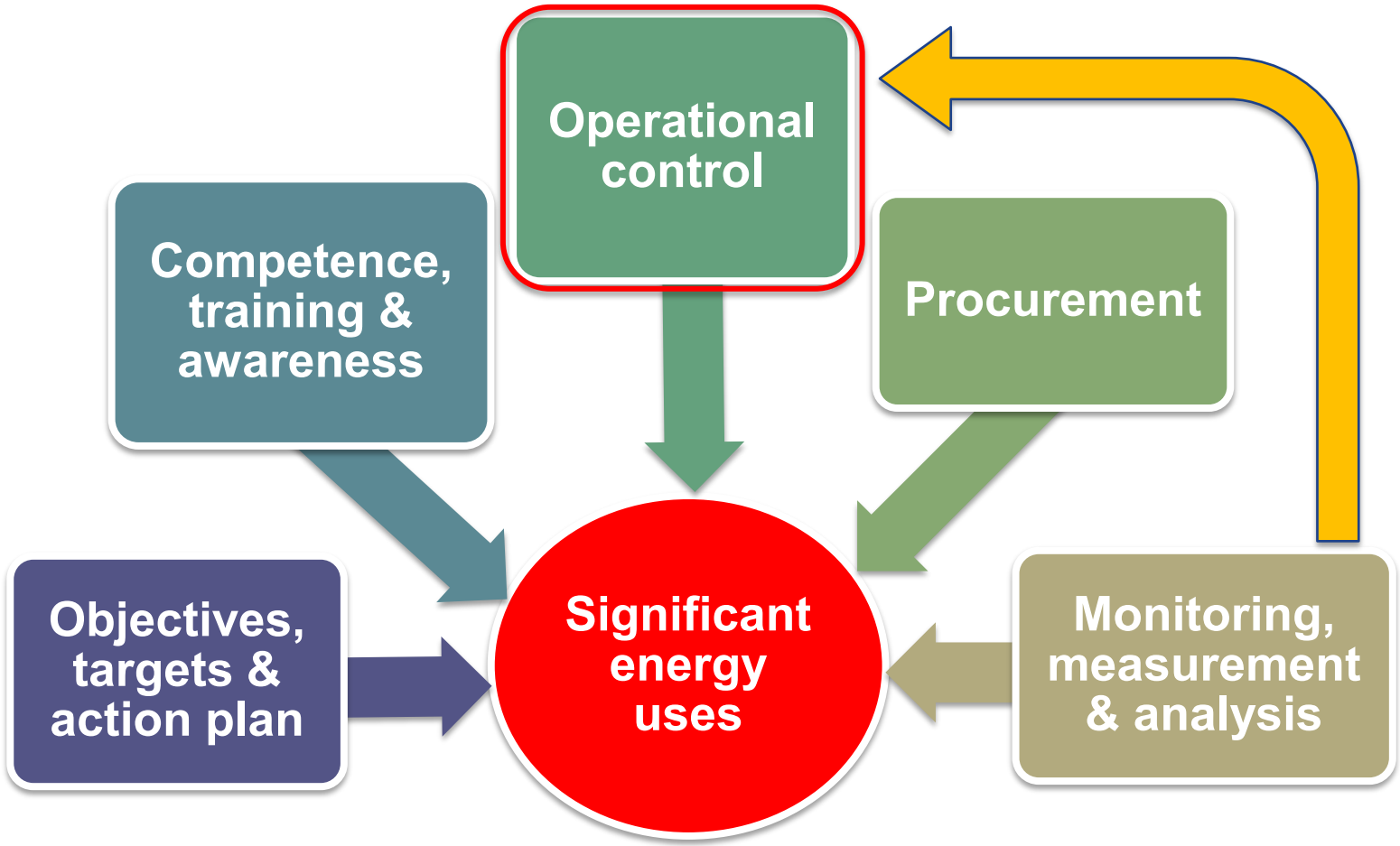


Tasks 17: Communication of Controls

Identify SEU affected personnel, then….

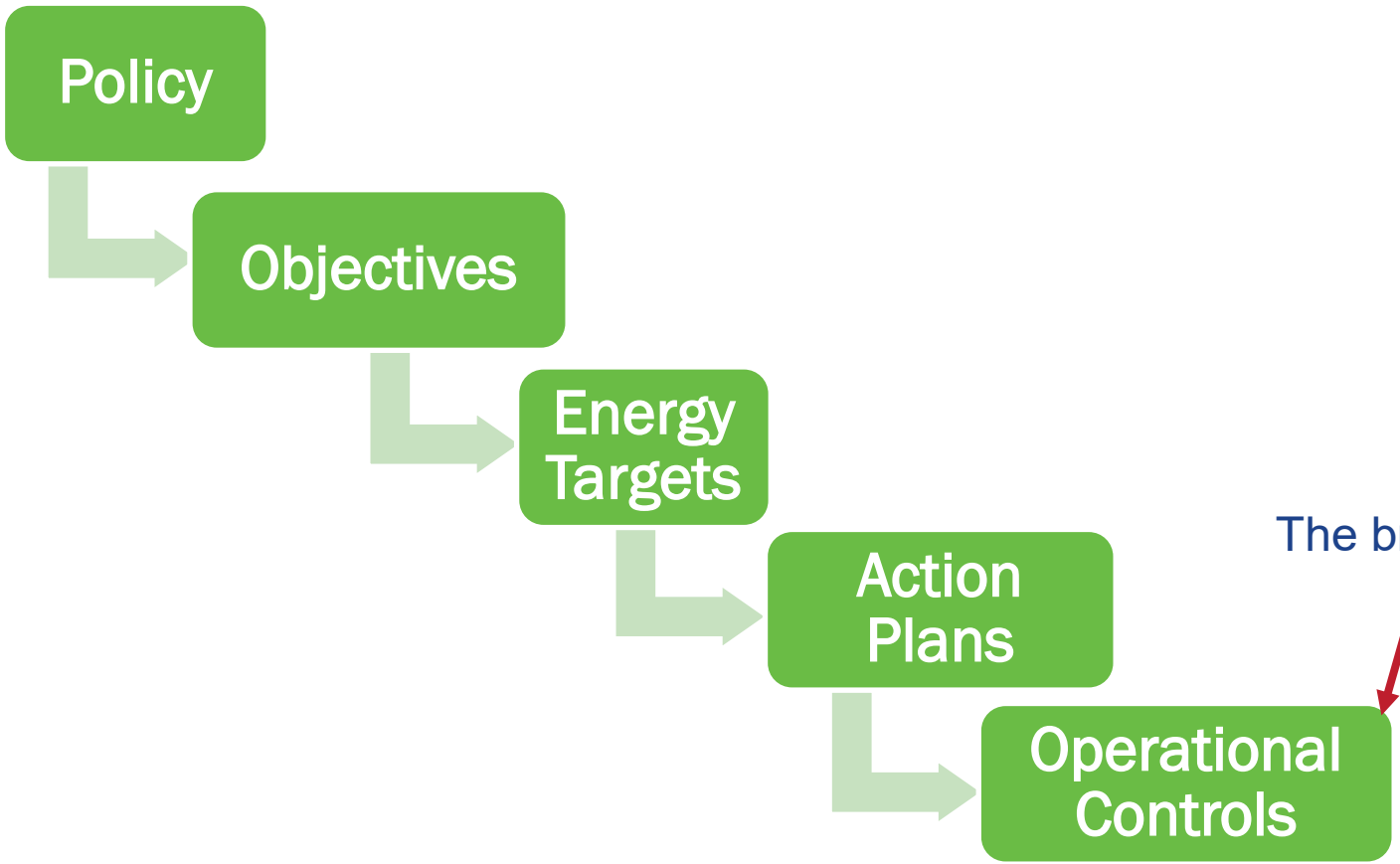
- On-the-job training
- Work instructions or operating procedures
- Classroom training
- Posted list of specified settings
- Logbooks
- Email in corporate intranets

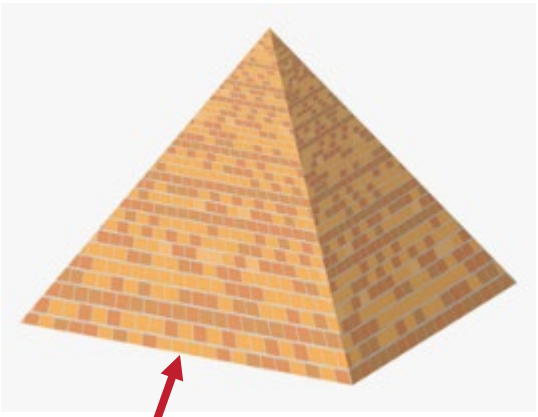
Task 17: Connections to MM&A



Tasks 1-17: The Big Picture

- Building the energy success pyramid starts with a wide base of small actions that build to the completion of energy policy





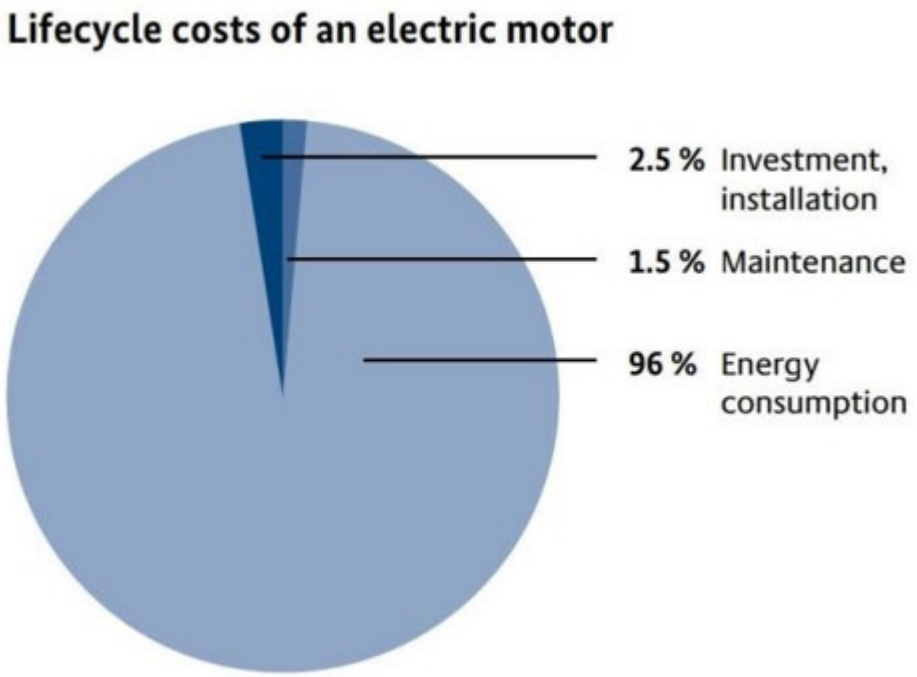
The broad base

Task 18: Considerations in Design

- Consider energy performance improvement and operations in the design of new, modified and renovated facilities over the lifetime
- Design the facility to be efficient right from the start and ongoing
- Include these items in the design specifications that are sent out for quote

Task 19: Procurement Specific Actions

- Inform suppliers that energy performance is an evaluation factor for SEU-related purchases
- Establish operating lifetime energy performance criteria for purchases that can significantly affect energy performance
- Develop documented specifications for:
  - the purchase of energy supply
  - ensuring the energy performance of procured equipment and services



Section 6: Performance Evaluation (Tasks 20-23)

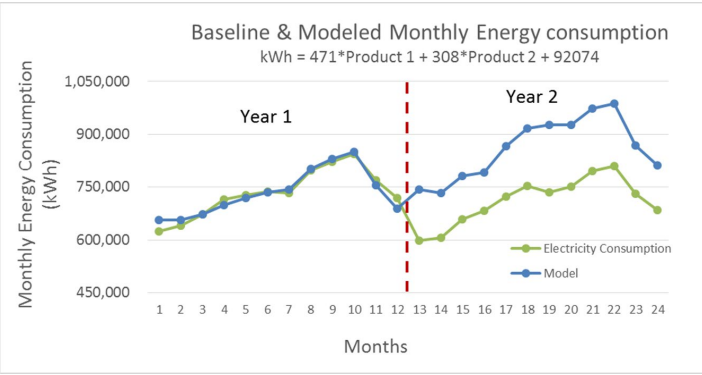
Check on how you are doing for both your EnMS and your energy performance improvement

Are you effectively monitoring and measuring your EnMS and your energy performance improvement?
How are your tracking systems working?
Are internal audits and management reviews all set up?

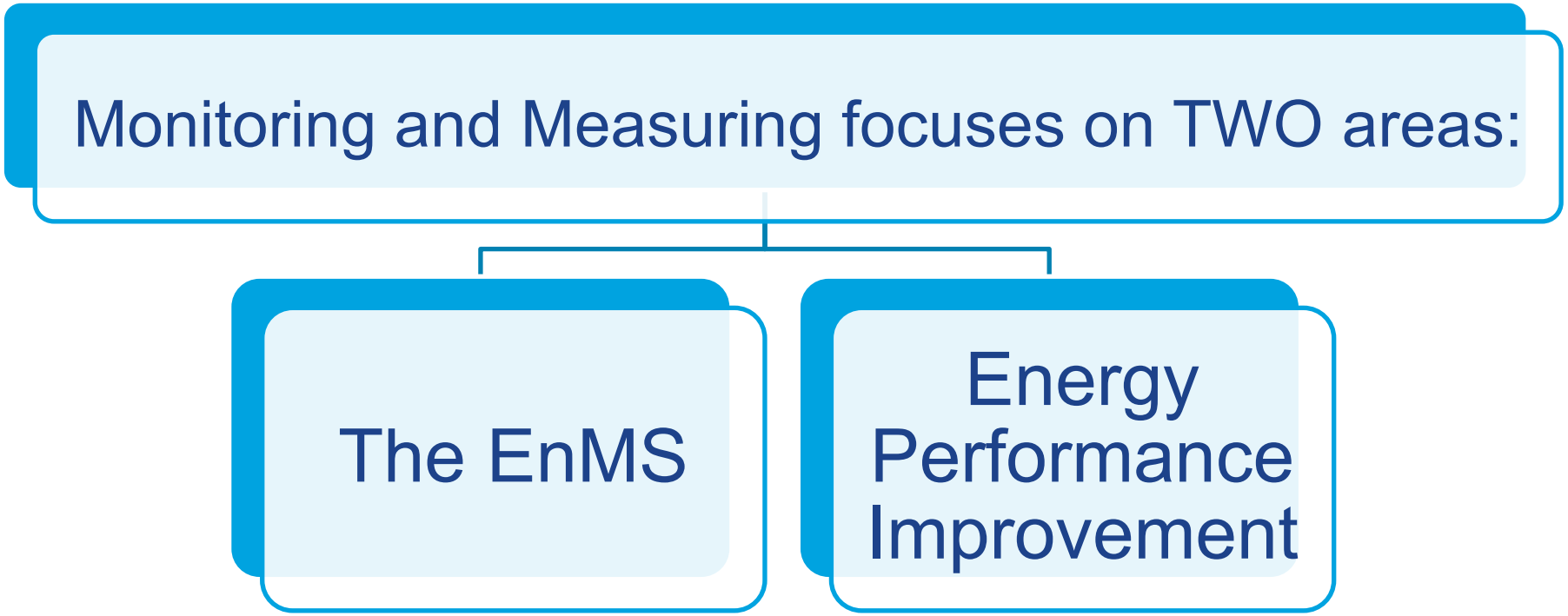
Section 6: Performance Evaluation

Section 6: Performance Evaluation

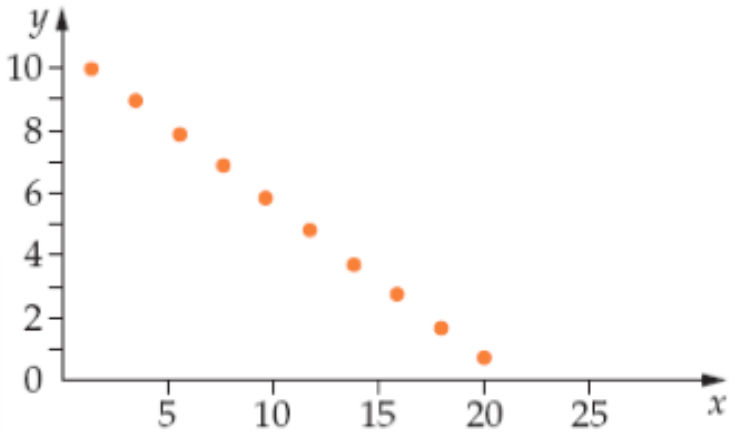
Task 20	**Monitoring and Measurement of the EnMS**	We monitor trends in energy management system (EnMS) performance and evaluate the effectiveness of the EnMS in achieving intended outcomes and planned results. The methods used, the frequency of the monitoring, and when the results are analyzed and evaluated are defined.
Task 21	**Monitoring and Measurement of Energy Performance Improvement**	We monitor and measure the key characteristics of processes that affect our energy performance. We define the methods used, the frequency of the monitoring and measurement, and when the results are analyzed and evaluated. We evaluate our energy performance improvement and investigate and respond to significant deviations in energy performance.



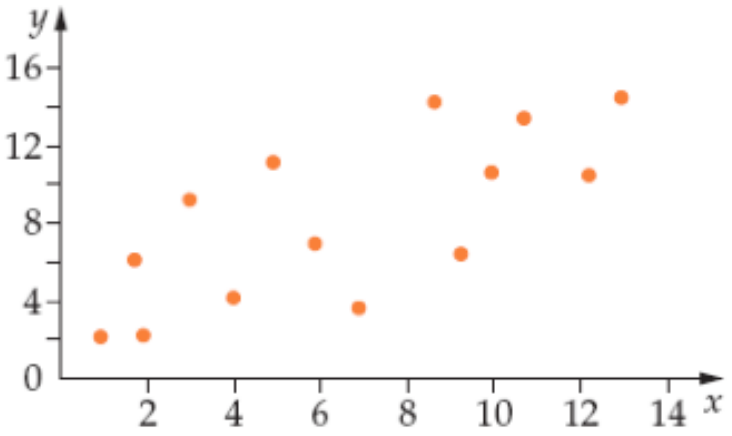
Performance Evaluation: The Big Picture



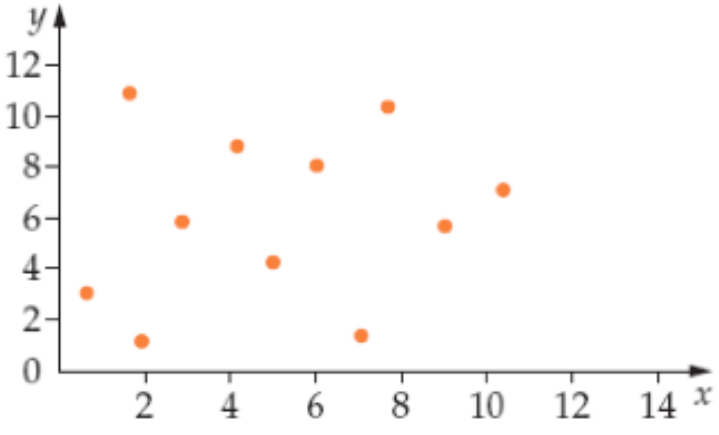
Task 20: Track Measurements to Monitor Trends



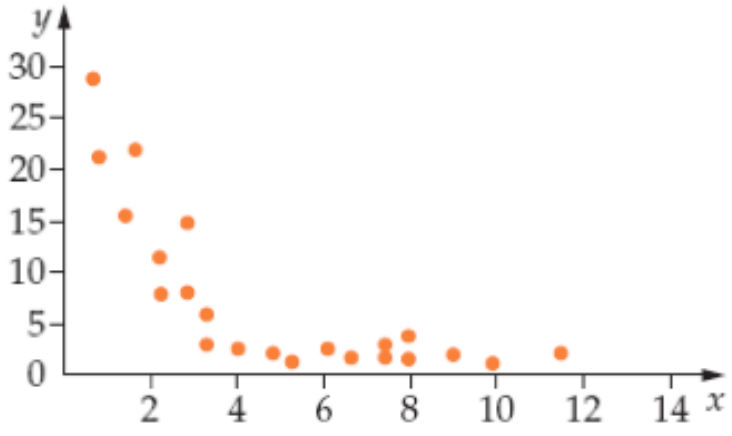
A strong, negative linear trend



A weak, positive linear trend



No trend



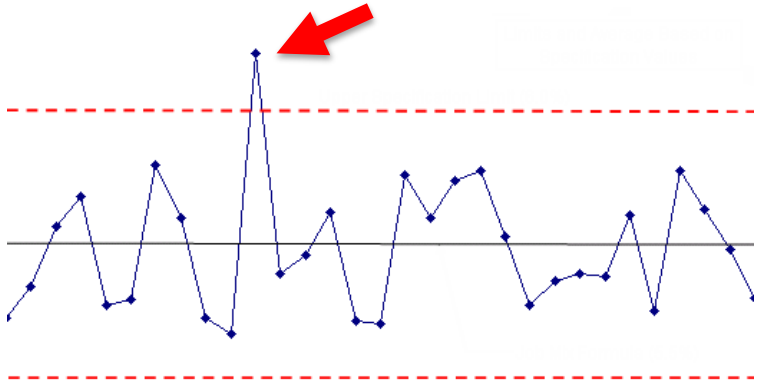
A weak, negative non-linear trend

Plotting and trending systematic results is a GREAT method for evaluating the operations of your EnMS.

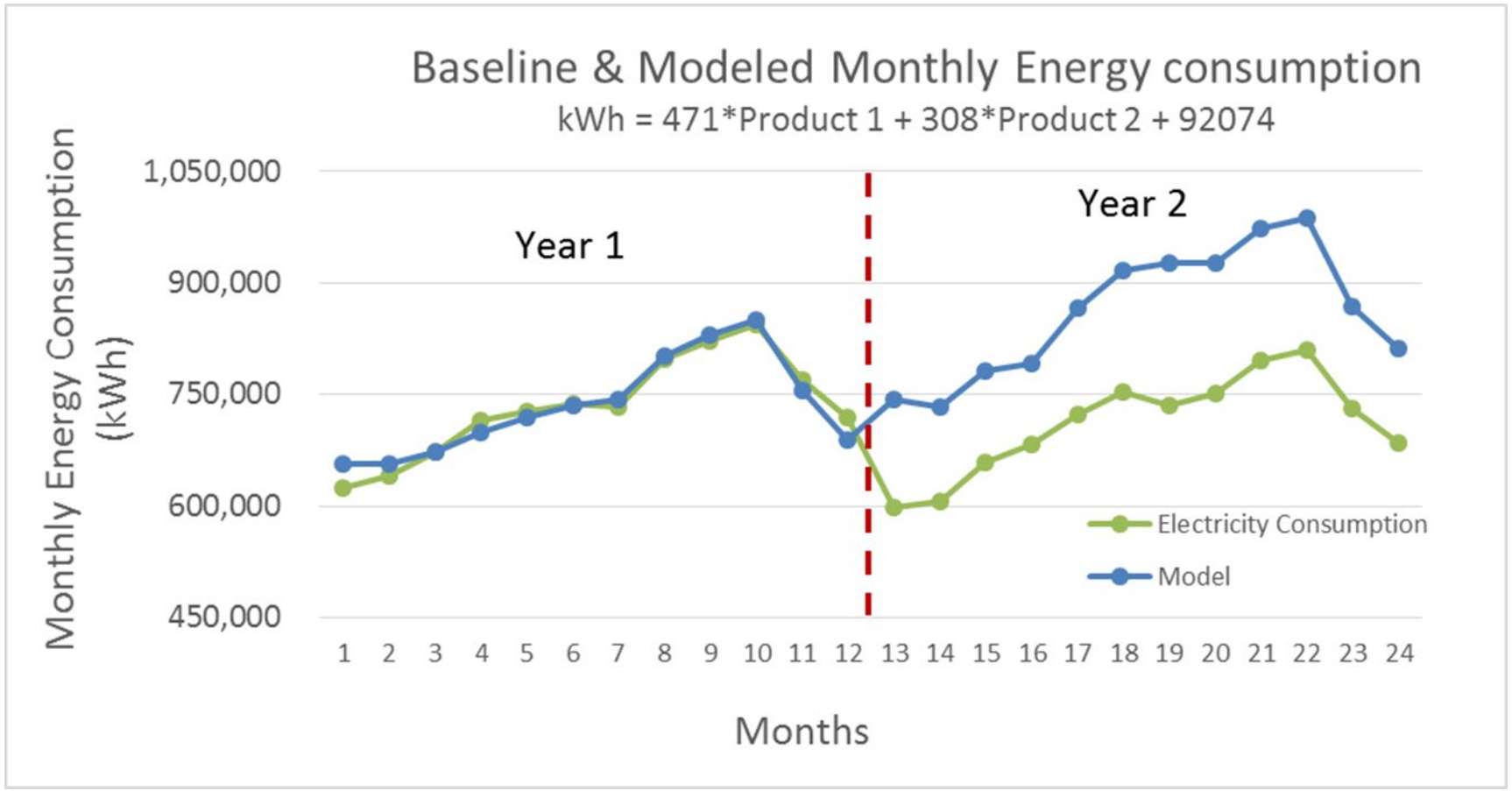
Task 21: Key Term

- Significant deviation:
  - "The organization shall investigate and respond to *significant deviations* in energy performance." (ISO 50001: 2018, 9.1.1)
  - When to respond and how to respond will be determined and appropriate personnel will be trained
  - Maintain records of the results of the responses and investigations into significant deviations

Your energy team defines what amount of deviation becomes significant



Task 21: MMA&E Energy Performance



Polling Question 2

Polling Question

2) Based on previous work and what you have learned during these energy management sessions, what method do think you will used to determine your energy performance?

A. Month of current year versus month of previous year (no relevant variables)
B. Combined total energy consumption per unit of production, trended
C. Actual total energy consumption per month versus budget
D. Linear regression with relevant variables
E. We are not sure yet
F. “Where we’re going, we don’t need any roads!”

Section 6: Performance Evaluation (continued)

Section 6: Performance Evaluation

Task 22	**Internal Audit**	We conduct internal audits of the 50001 Ready energy management system at specified intervals and report the results to relevant management. We identify trends in internal audit results for consideration in management review.
Task 23	**Management Review**	Top management periodically reviews the 50001 Ready energy management system and our organization's energy performance to ensure its continuing suitability, adequacy, and effectiveness.

Task 22: The Internal Audit Process

Task 22: The Internal Audit Process

- Findings need to be based on facts and not opinion
- Findings should include:
  - Direct observations
  - Statement of facts, first-hand only, not hearsay
  - Documents, data, and records
  - Evidence
- First-hand, verifiable
- Touch it, see it , read it, hear it

Task 22: The Internal Audit Process

- <u>REMEMBER THESE!</u>
- Anything that you invoke on yourself from your own EnMS requirements, processes, or procedures, are auditable under your internal audit program
- To ensure objectivity and the impartiality of the internal auditing process, personnel should not audit items that they developed or worked on.

Task 23: Management Review

Management review is the engagement of top management in reviewing the EnMS and the energy performance, as well as asking and answering these questions:

- How have we done?
- Where can we improve?
- What do we need to change?
- Do we have enough resources in the right places?

Section 7: Continual Improvement (Tasks 24 - 25)

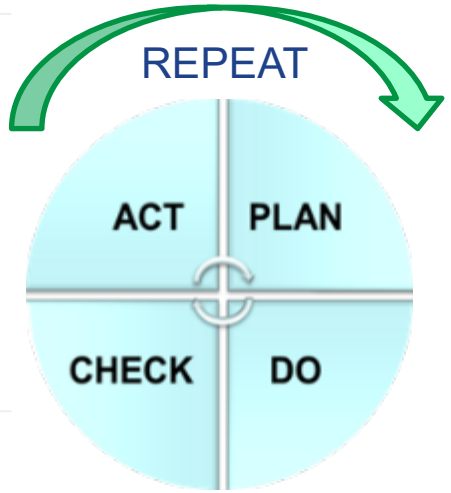
When we check, if things are not okay, then we act to fix them, and we do this in an ongoing method

Do you have a strong corrective action program to fix and follow up on nonconformities to your EnMS?
Do you continually improve both your EnMS and your energy performance?

Section 7: Continual Improvement

Section 7: Improvement

Task 24	**Corrective Actions**	We identify nonconformities and other problems in the 50001 Ready energy management system and take appropriate corrective action.
Task 25	**Continual Improvement**	We have a 50001 Ready energy management system and continually improve its processes and interactions. We continually improve the suitability, adequacy and effectiveness of our energy management system. We achieve and demonstrate continual energy performance improvement.



Task 24: Key Terms

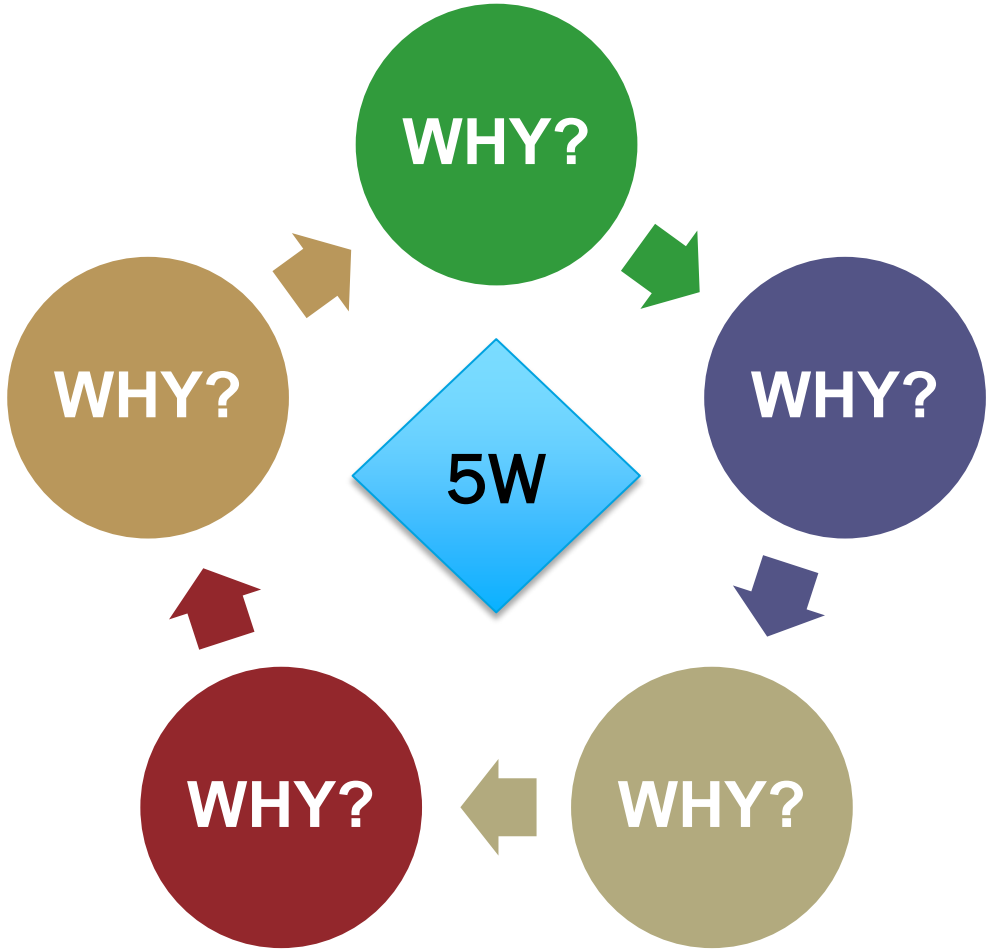
- **3.3.3 nonconformity**
  - non-fulfilment of a *requirement* (3.3.1)
- **3.3.1 requirement**
  - need or expectation that is stated, generally implied or obligatory
- **3.3.4 corrective action**
  - action to eliminate the cause of a *nonconformity* (3.3.3) and to prevent recurrence

Task 24: Impact and Why?

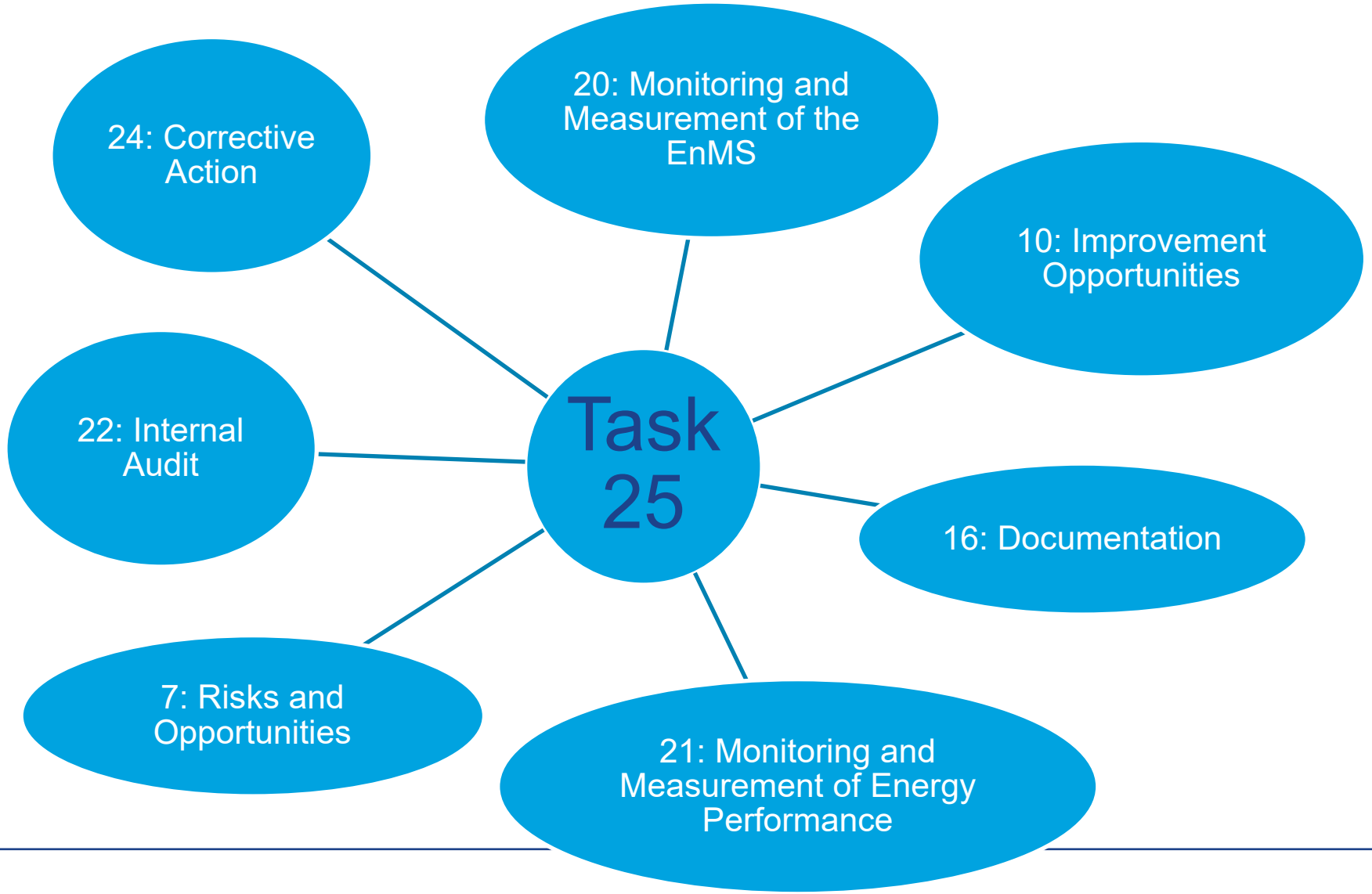
- **What is the impact?**
- **What is the need for further action.**
  - –Do similar nonconformities exist?
  - –Can similar nonconformities occur?

- **Why did this happen?**
  - –Five Why's Exercise
  - –Get to the root cause

- **Eliminate the root cause**
  - –Take corrective action



Task 25: Connecting the Tasks



Task 25: Continual Improvement

- You SHALL demonstrate continual improvement of your EnMS
- You SHALL demonstrate continual improvement of your energy performance

- Today's Content

Remember to use the 50001 Ready Navigator

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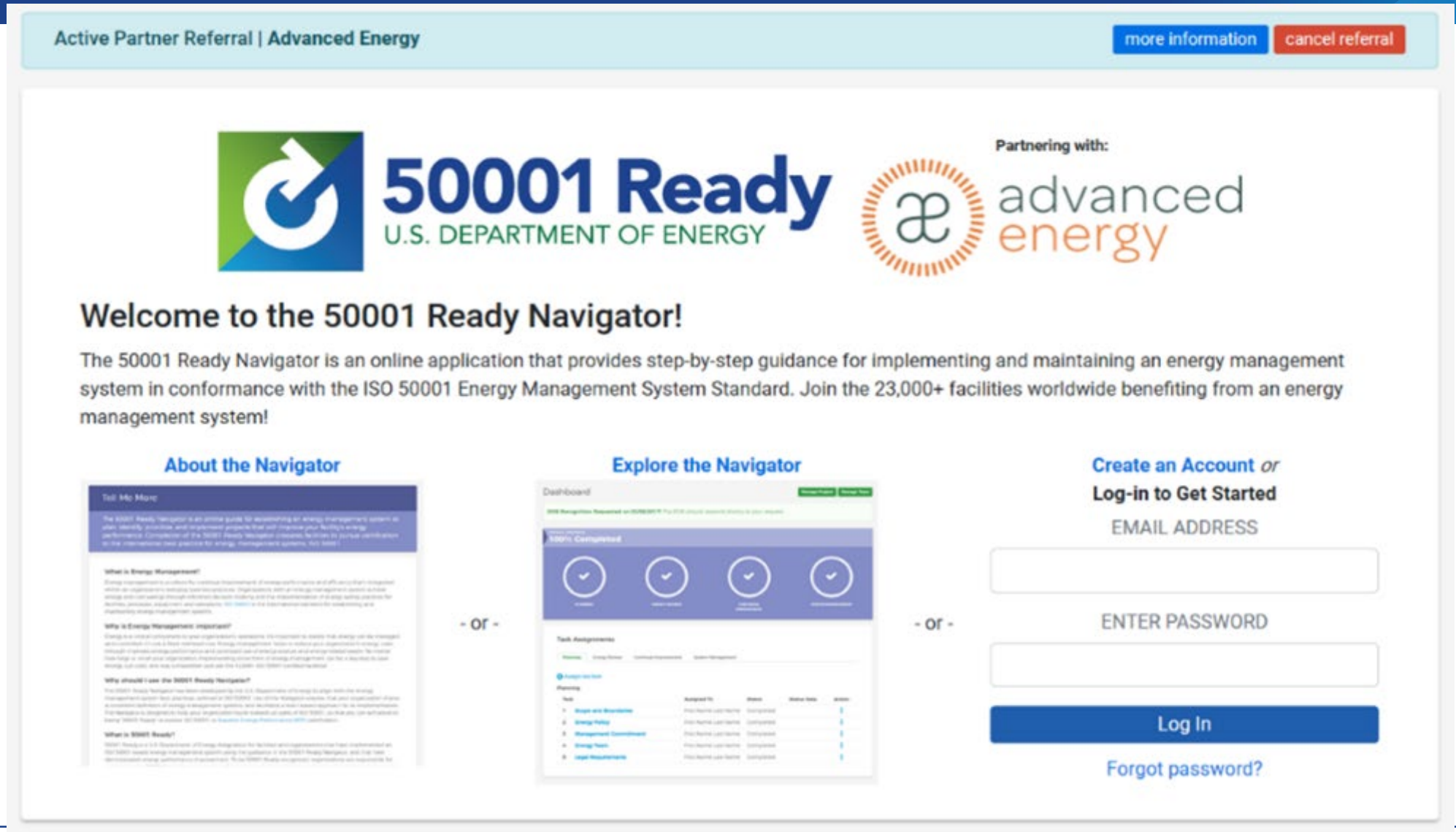
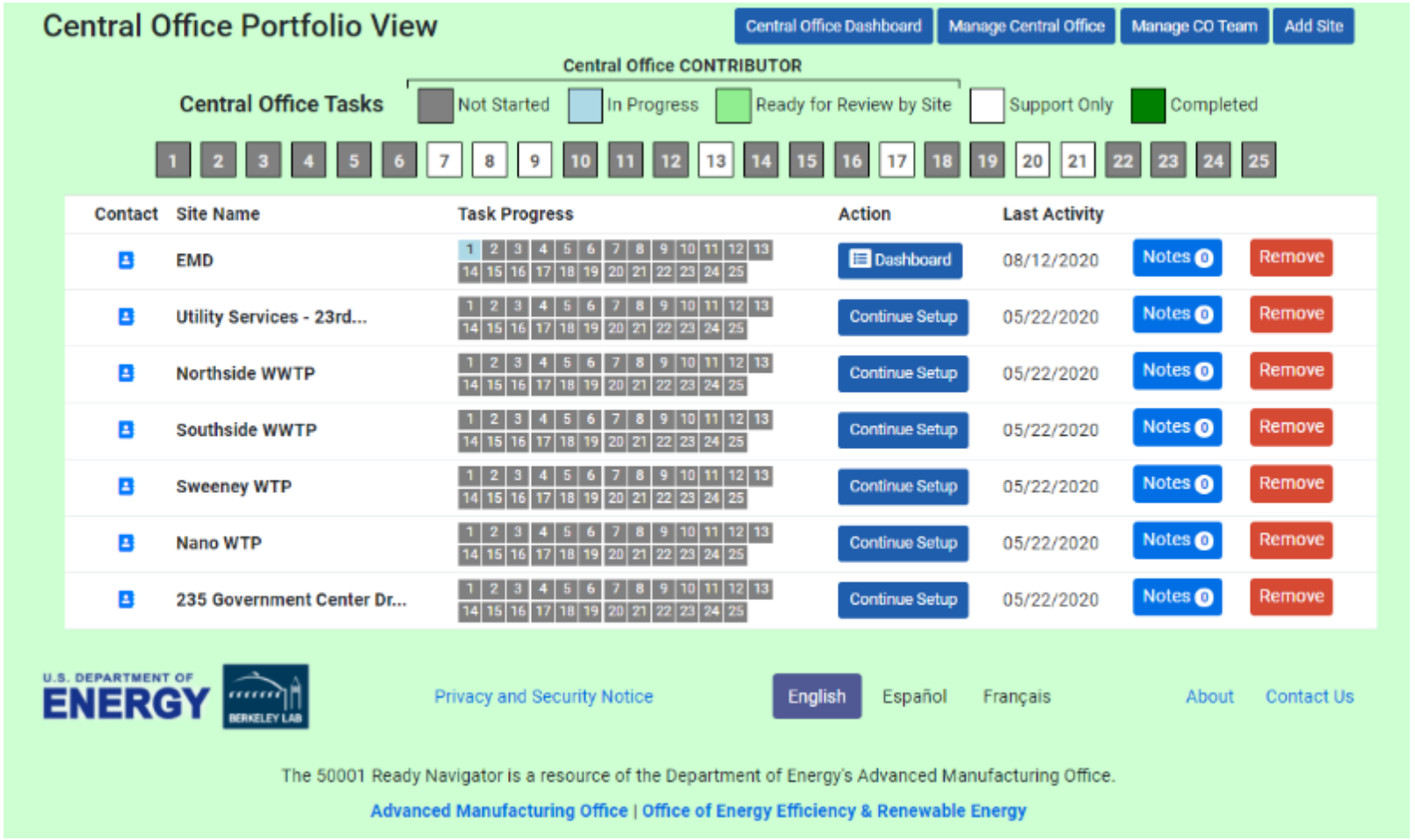
Use the Navigator

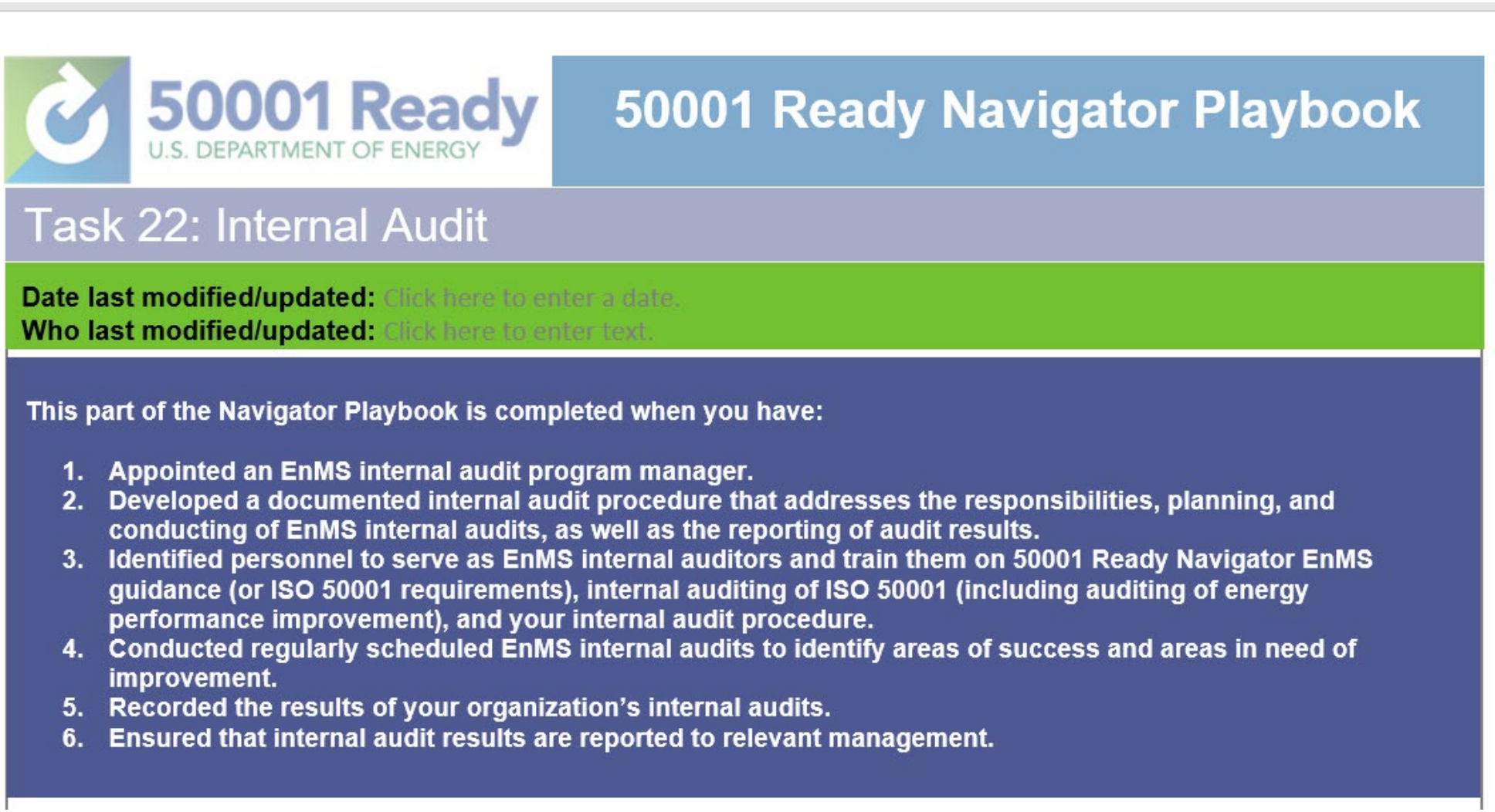


Use the Multi-Site Option

- The multi-site option can be very helpful



Use the Playbooks



Polling Question 3

Polling Question

3) On a scale of one to five, how would you rate the value of the 50001 Ready tool, including the informational tabs and the downloadable playbooks, for implementing energy management?

A. FIVE – Excellent. I used this during this training and will continue to do so
B. FOUR – Very good. I was able use this some and want to use it more
C. THREE – Okay. I did not get to fully use or evaluate this tool
D. TWO – Not sure. I did not get to use this tool at all during this training
E. ONE – No value to my organization
F. ZERO – Life (and 50001) is like a box of chocolates.
You never know what you're going to get!"

- Today's Content

Where can we go from here?

OPTIONS to Move Forward

- If not already done:
  - Purchase and download the ISO 50001: 2018 standard
  - Set up your 50001 Ready account
  - Download 50001 Ready playbooks for tasks 1-25 and began working on these
- Work through the 25 task playbooks:
  - Leverage ISO 9001, 14001 & 45001 systems, if already in place
  - Make the playbooks your own
  - Evaluate your energy performance improvement
- Join a cohort for further progress assistance (**more to follow**)
- Apply for *50001 Ready Recognition* (use the navigator to apply)
- Go for ISO 50001 third-party certification

The DOE AMO Cohort Program

- The DOE AMO currently has the *50001 Ready* Technical Assistance Program in operation
  - This program uses the cohort method
  - This program requires specific commitment
  - This program is FREE

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The DOE AMO Cohort Program

- The Cohort Method
  - Typically, five to seven organizations
  - Multi-site organizations are okay
  - Benefit from shared learning
  - Benefit from shared best practices
  - ~ 8 - month engagement

The DOE AMO Cohort Program

- Participating organizations will ***commit to***:
  - Providing staff resources to complete the program
  - Providing requested data collection forms, pre and post cohort
  - Completing assigned preparation and homework items
  - Applying for *50001 Ready Recognition*

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50001 Ready Technical Assistance Program
Site Level Participant Agreement

The DOE AMO Cohort Program

- Participating organizations will ***receive***:
  - You have already received the eight webinar sessions!
  - Guidance to complete the pre and post cohort data collection forms
  - EIGHT group sessions for task and playbook review
  - EIGHT 1-on-1 session with each individual site for check in on progress and technical assistance
  - Assistance with applying for *50001 Ready Recognition*


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50001 Ready Navigator Playbook

Task 1: An EnMS and Your Organization

Date last modified/updated: Click here to enter a date.
Who last modified/updated: Click here to enter text.
Internal audit: Click here to enter a date.
Management review: Click here to enter a date.

For Task 1: This part of the Navigator Playbook is completed when you have:

1. Identified the external and internal issues that affect your organization's ability to improve its energy performance and achieve the intended outcomes of the EnMS.
2. Recorded this information.

For Task 7: This part of the Navigator Playbook is completed when you have:

1. Identified the impacts, likelihood of occurrence, and risk level arising from the issues you already recorded
2. For each of the identified risks and opportunities, plan and implement actions to address them using the processes of the EnMS.

Add this information to the Risks and Opportunities Register by completing columns four through eight.

The DOE AMO Cohort Program

- Desired Outcomes:
  - Gain an understanding of ISO 50001 and create your EnMS
  - Use the *50001 Ready* navigator tool to implement the 25 energy management tasks and create your playbooks
  - Improve your overall plant operations
  - Demonstrate ongoing energy performance improvement
  - Apply for and receive ***50001 Ready Recognition*** for self-attesting to completion

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Applying for 50001 Ready Recognition

The application is accessible from the navigator

1. Self-attest to task implementation

Complete Self Attestation Form

2. Complete Performance Improvement Report

Submit energy performance data 'snapshot'.

3. Management sign-off

Sign-off by management of 50001 Ready implementation.

DOE recognizes 50001 Ready Achievement

Use the 50001 Navigator instructions to apply

Participation in the DOE AMO Cohort Program

If you are interested participating in a DOE AMO Energy Management Cohort as a follow up to this eight-week webinar series:

PLEASE LET US BOTH KNOW "**ASAP**":

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- Review and Wrap Up

Webinar Wrap Up
Kahoot Quiz Game
Q&A

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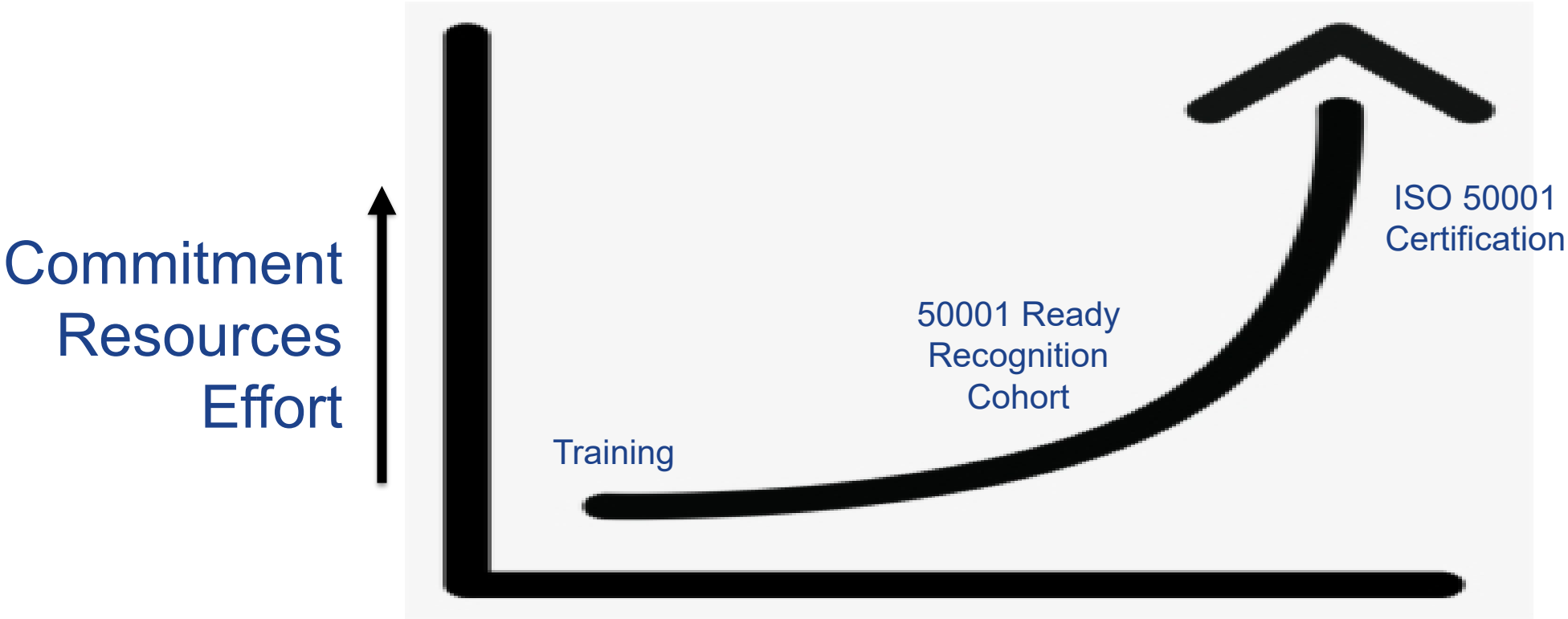
Training Schedule: By Session

1. An Overview – DONE, January 18
2. Laying the Foundation of 50001 – DONE, January 25
3. Where does all the Energy Go? – DONE - February 1
4. Sorting out the Energy Data – DONE - February 8
5. Engaging Other Functions – DONE - February 15
6. Evaluating Performance – DONE - February 22
7. Ensuring Continual Performance – DONE - March 1
8. Wrap Up and Next Steps – TODAY - March 8

NEXT: Join the follow up cohort?

Consider your Pathway for 50001 Energy Management



50001 Ready - Resources

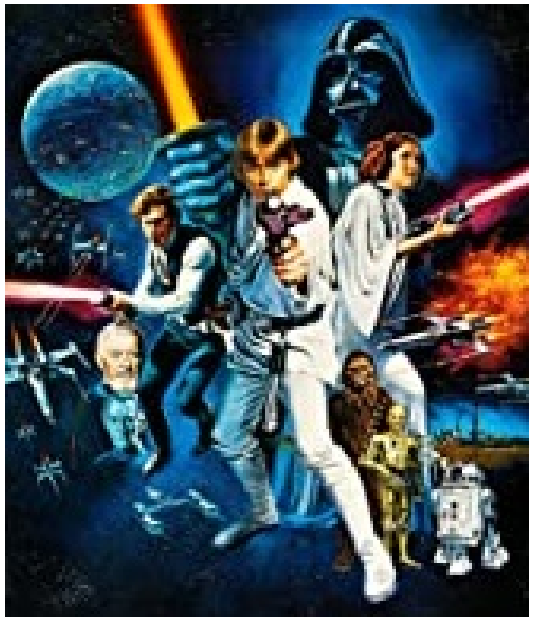
- 50001 Ready Program
  - https://www.energy.gov/eere/amo/50001-ready-program
- 50001 Ready Navigator
  - https://navigator.lbl.gov/
- Energy Footprint Tool
  - https://www.energy.gov/eere/amo/downloads/energy-footprint-tool
- EnPI Lite Tool
  - https://enpilite.lbl.gov/
- 50001 Ready at Better Building
  - https://betterbuildingssolutioncenter.energy.gov/better-plants/software-tools

Polling Question 4

Polling Question

4) After attending all eight VINPLT trainings on *50001 Ready*, how do you feel about *50001 Ready* as a resource to help you with your energy management plans:

A. Overwhelmed, with no hope of recovery
B. Overwhelmed, but feeling much better
C. Optimistic
D. Very encouraged
E. Ready to get Ready
F. Looking forward to the follow up cohort!
G. And a wish from your presenter: *"May the force be with you!"*



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VINPLNT 50001 Training Survey-UPDATE

- https://www.surveymonkey.com/r/86ZPZJN

And now, our Kahoot Quiz Review Game

50001 Ready Navigator: Questions?

Context of the Organization	Leadership	Planning	Support	Operation	Performance Evaluation	Improvement
1. An EnMS and your Organization 2. People and Legal Requirements 3. Scope and Boundaries	4. Management Commitment 5. Energy Policy 6. Energy Team and Resources	7. Risks to EnMS Success 8. Energy Data Collection and Analysis 9. Significant Energy Uses 10. Improvement Opportunities 11. Energy Performance Indicators (EnPIs) and Baselines (EnBs) 12. Objectives and Targets 13. Action Plans for Continual Improvement	14. Competence and Training 15. Awareness and Communication 16. Documenting the EnMS	17. Operational Controls 18. Energy Considerations in Design 19. Energy Considerations in Procurement	20. Monitoring and Measurement of the EnMS 21. Monitoring and Measurement of Energy Performance Improvement 22. Internal Audit 23. Management Review	24. Corrective Action 25. Continual Improvement

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Please Contact Us With Any Questions

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