

Introduction to Energy Management

Resource Efficient Management of Energy (REME)



LU1.2 - Elements of Energy Management and factory level aspects

At the end of this module you will be able to...

Identify factory level aspects of energy while referring to the framework of energy management system as per ISO50001

Content



Overview of energy management elements



Factory level aspects to be addressed













Framework and PDCA for energy management system

What to expect from energy management

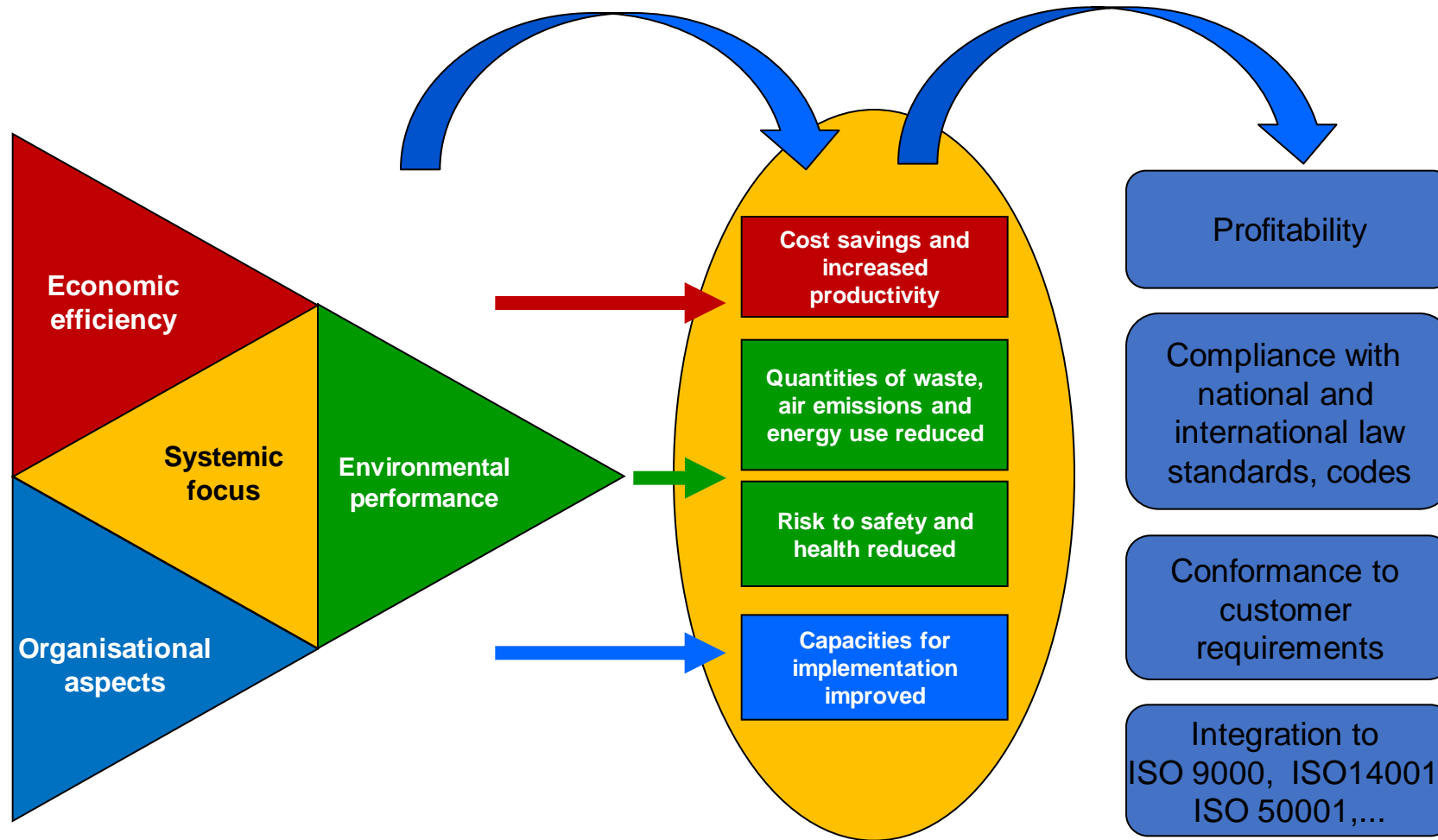


What to expect from energy management

-  Maintain a license to operate
-  Access to global markets
-  Maintain a competitive advantage
-  Minimize repetitive changes to energy mix
-  Reduction in cost by reducing energy wastage
-  Reduce downtime by improving energy reliability
-  Stop potential losses before they become issues
-  Ensure compliance with standards and customer requirements
-  Traceability of energy and GHG in the processes and supply chain
-  Embed energy management into organizational culture

Energy management business case

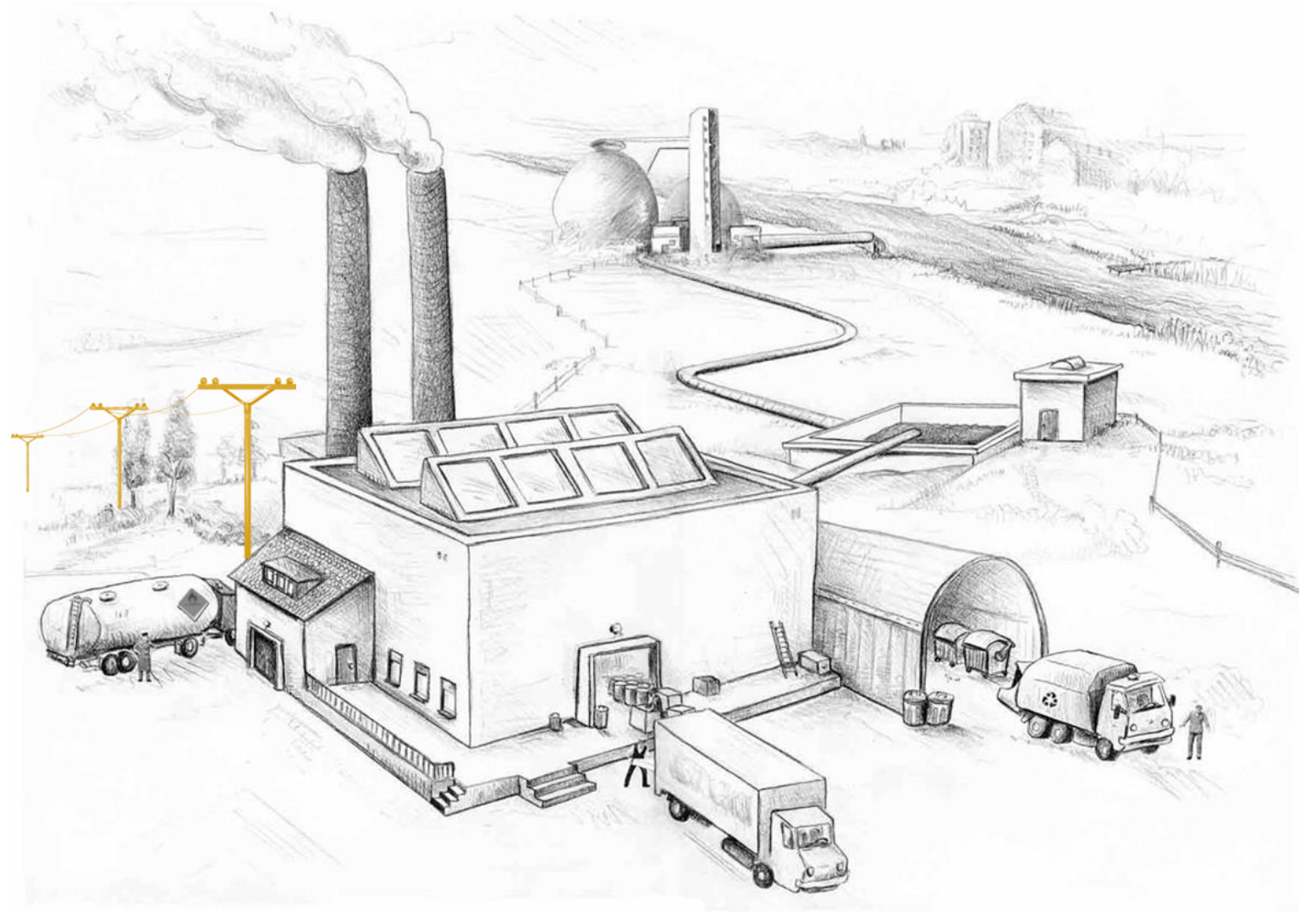
Outcome



Source: 4 wins by PREMAnet e.V.

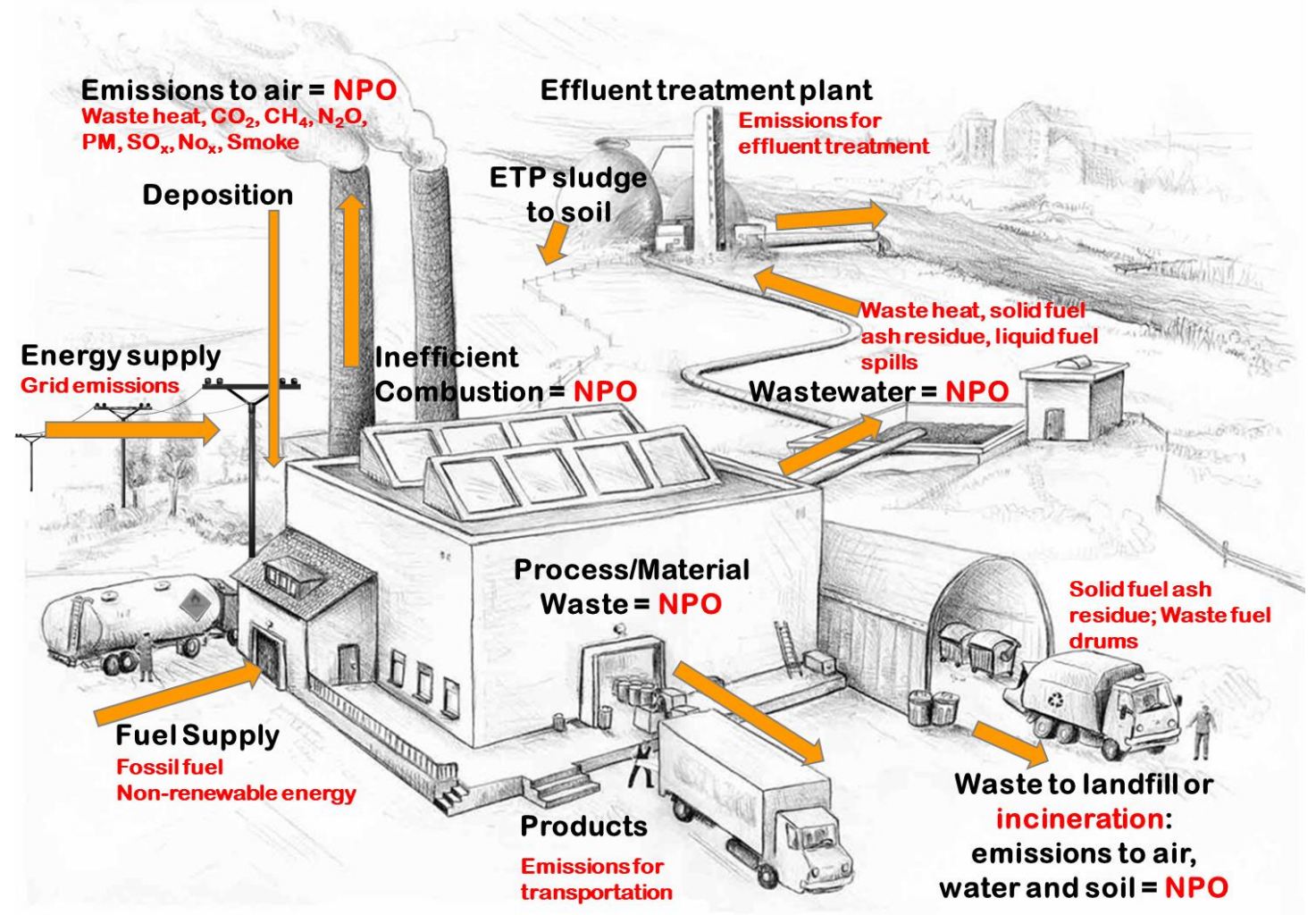
Energy Management

Factory level aspects



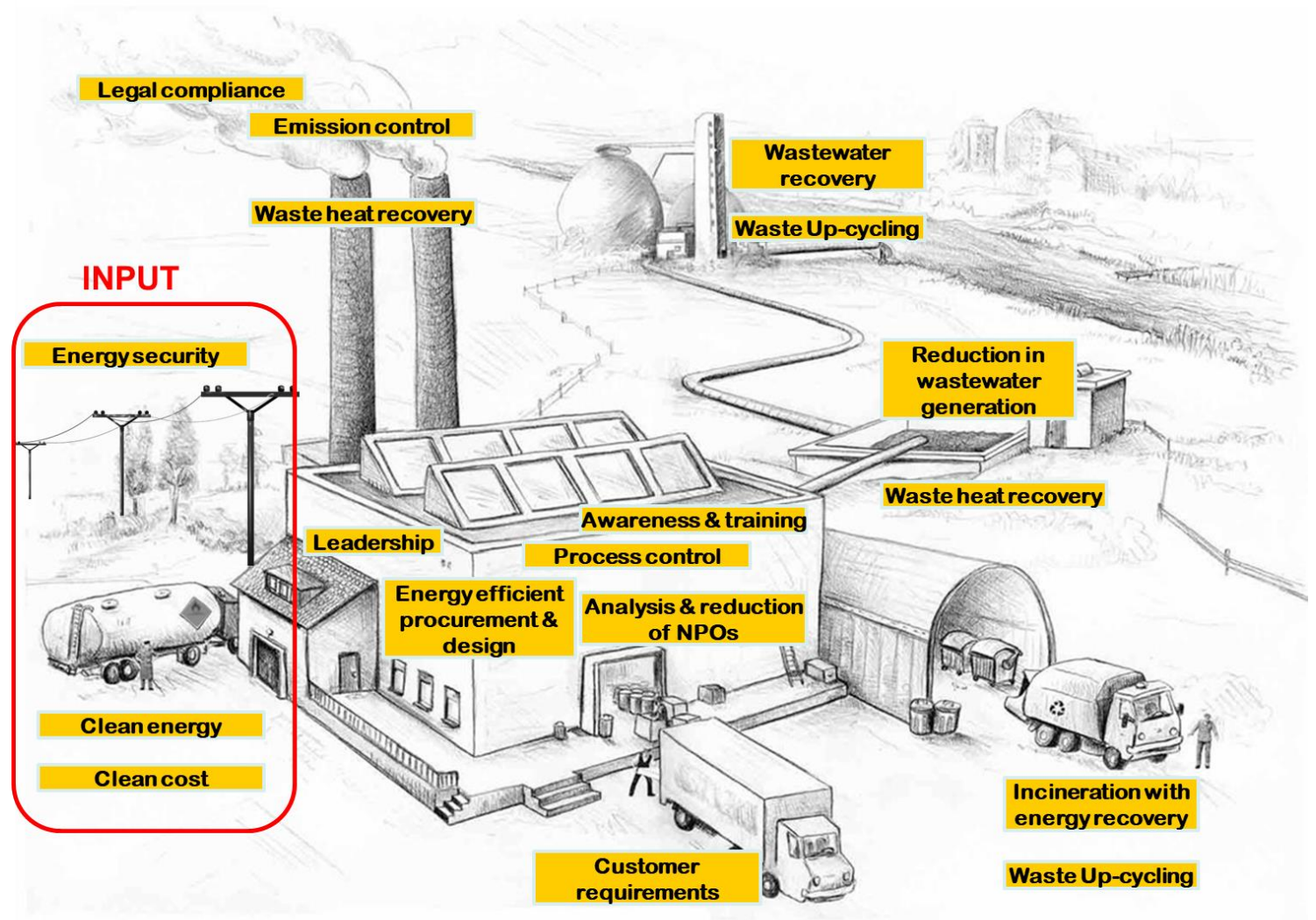
Energy Management

Factory level aspects



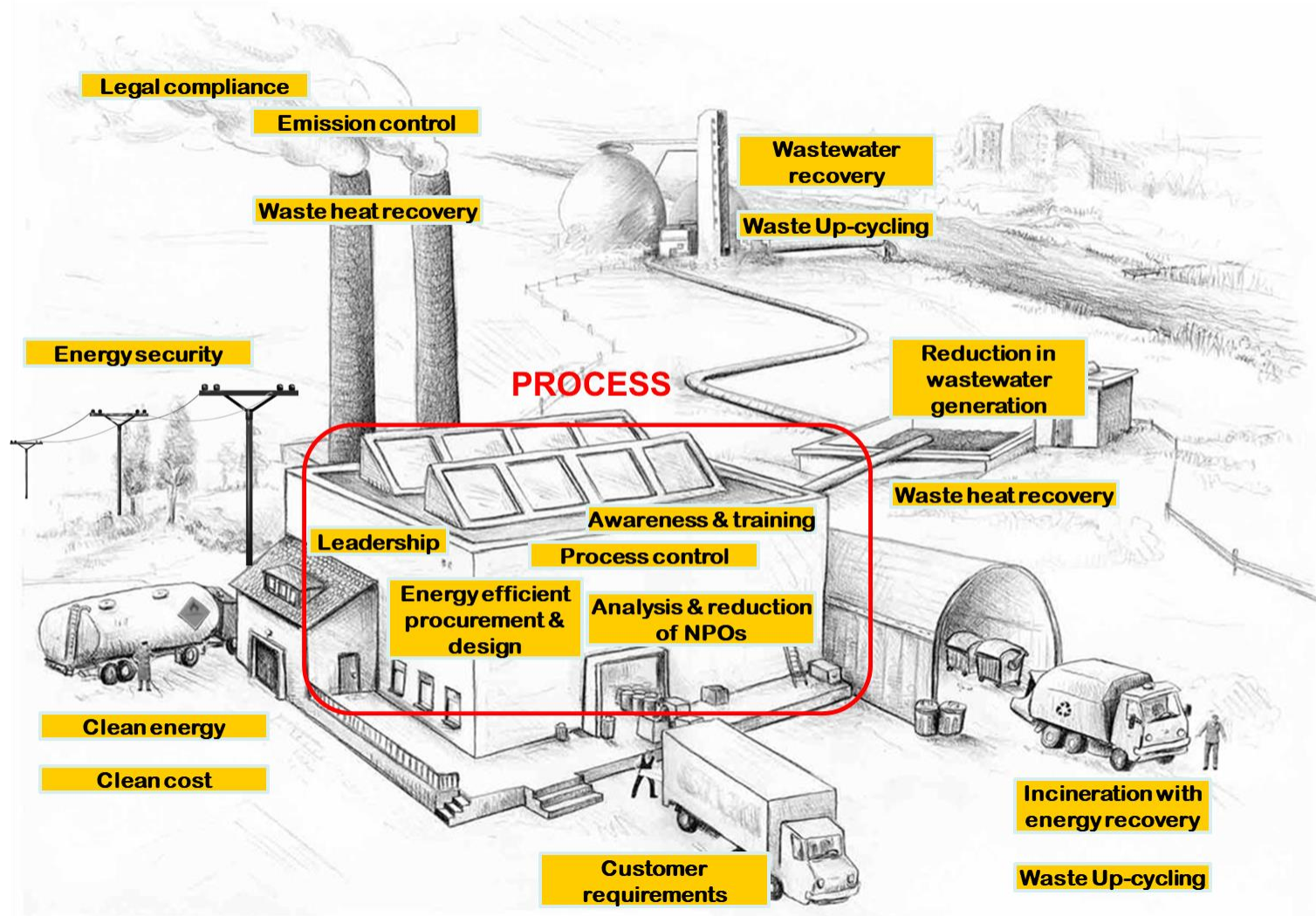
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Factory level aspects



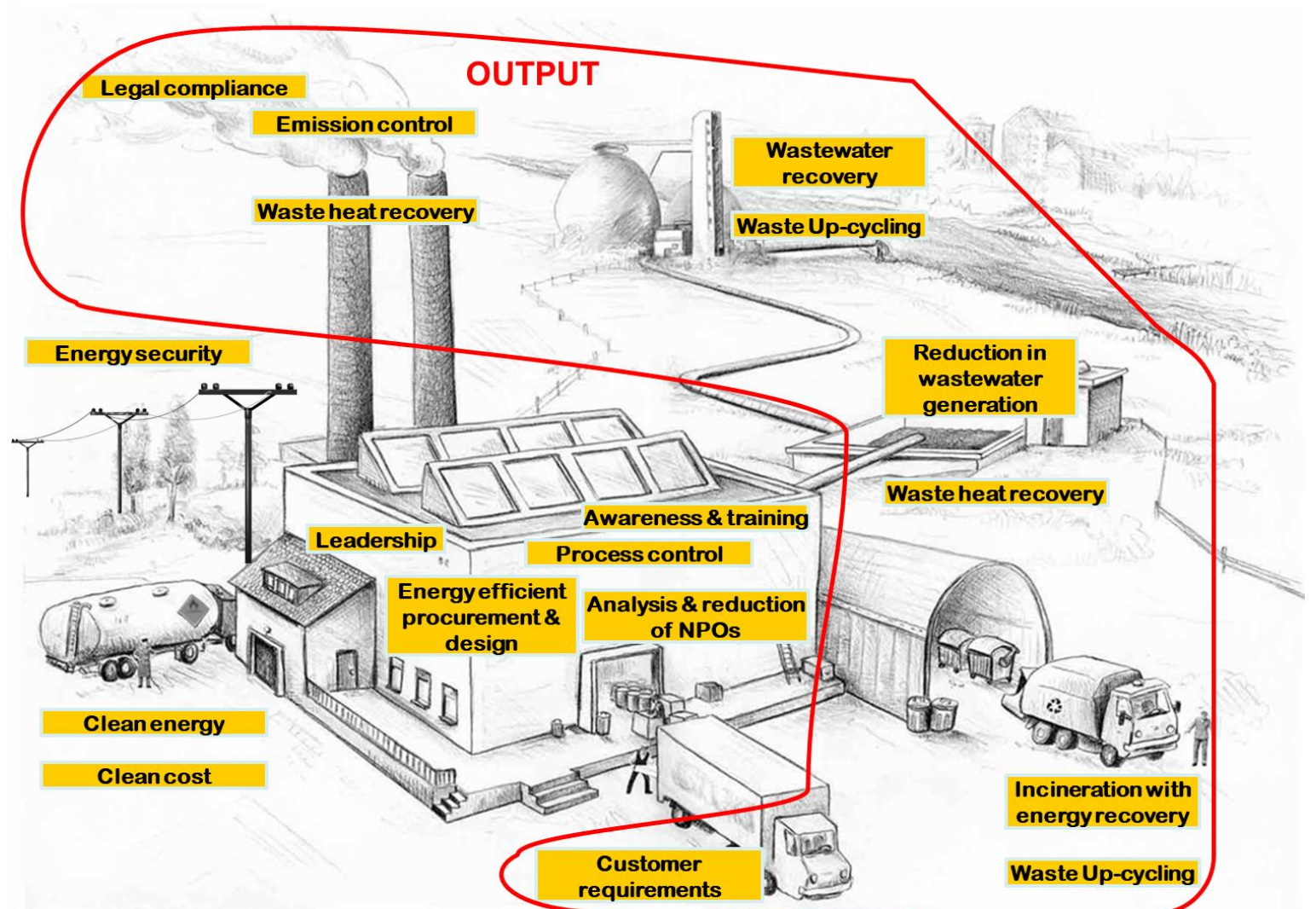
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Factory level aspects

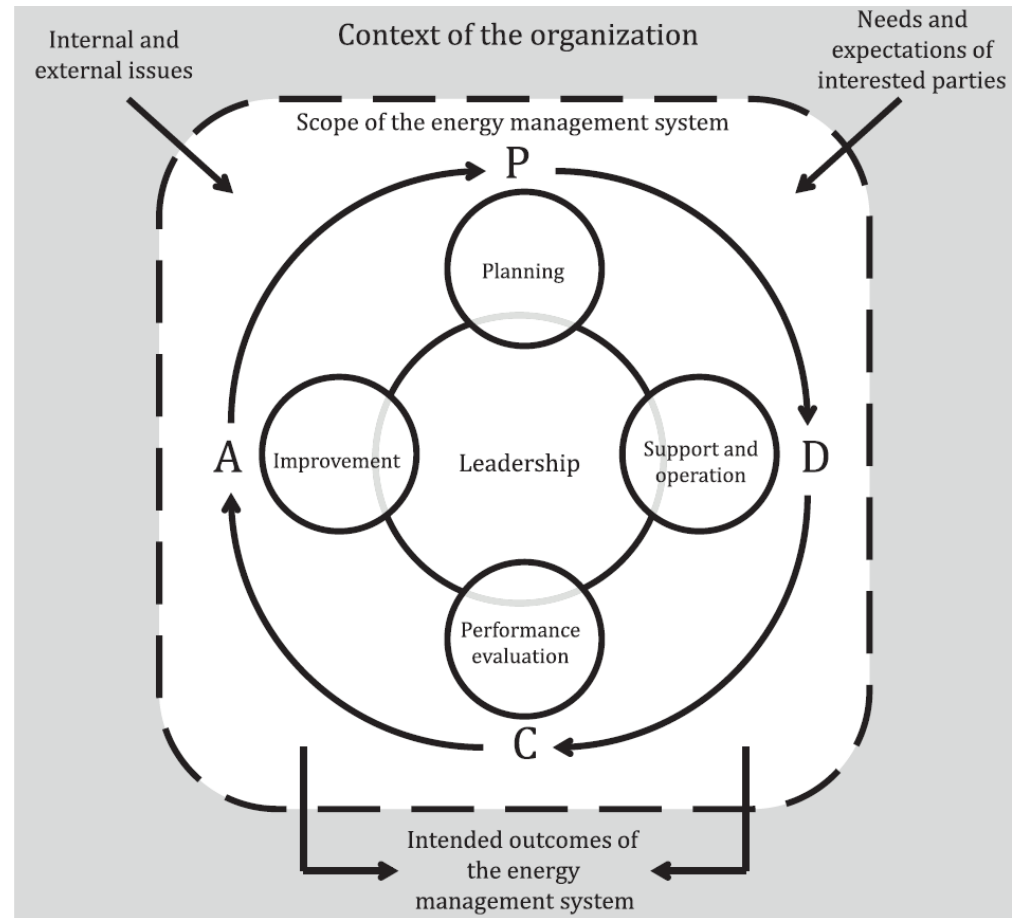


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Factory level aspects



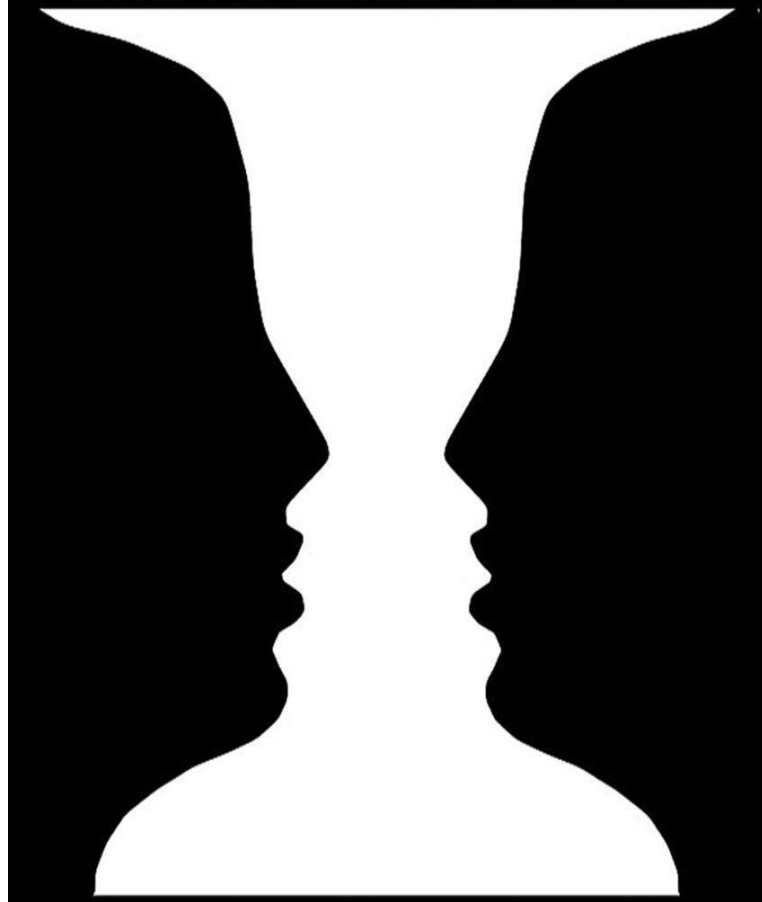
Energy Management Framework

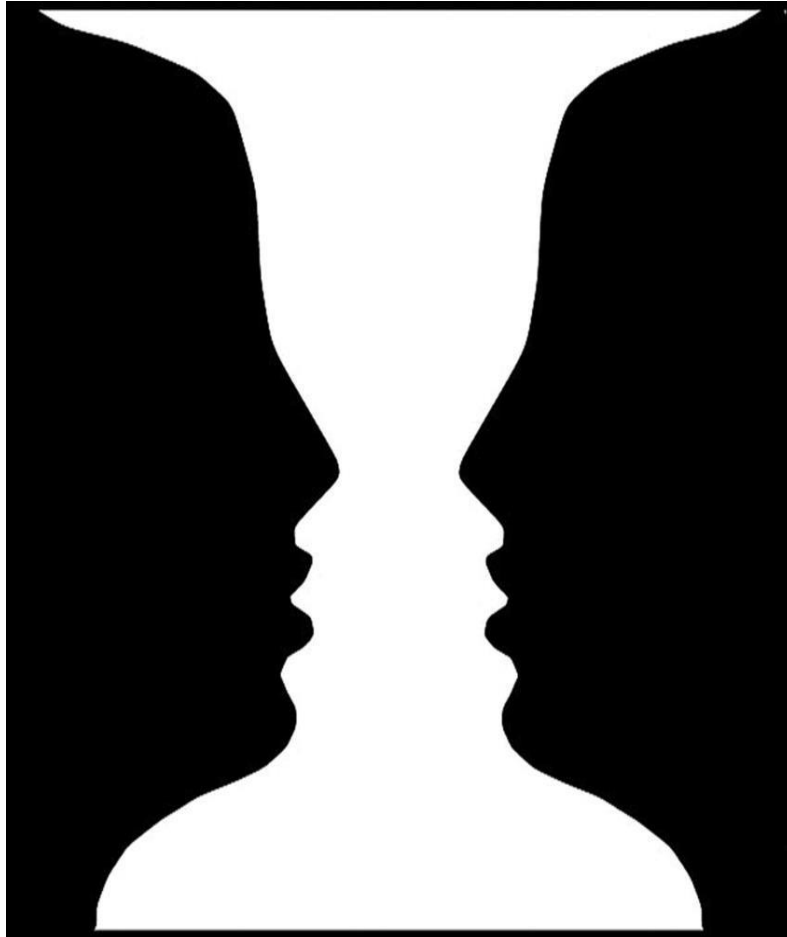


Source: ISO 50001:2018, Figure-1: Plan-Do-Check-Act Cycle

Energy Management Framework







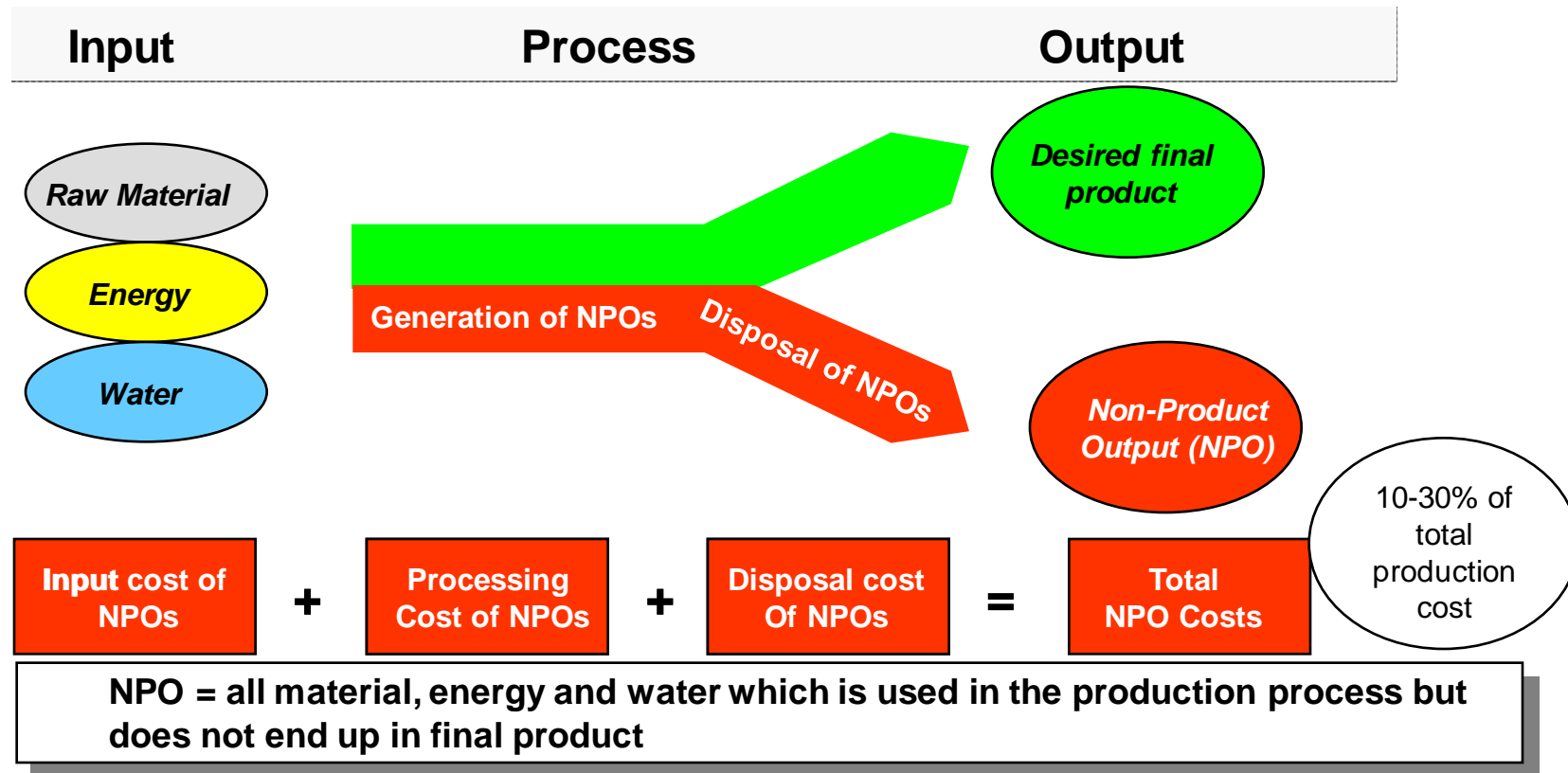
**Looking at
NPOs**

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**Change your
point of view**

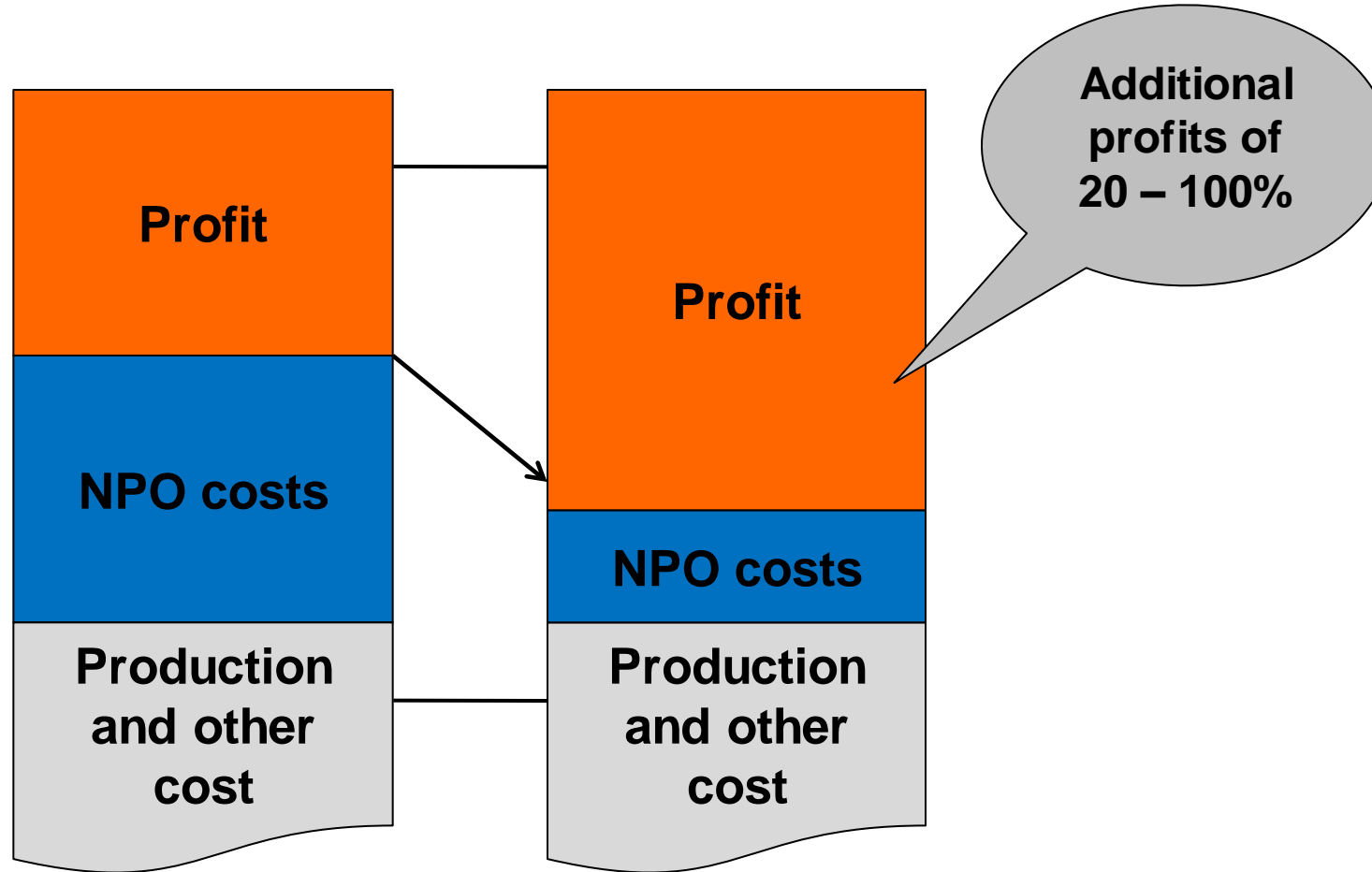
Starting points...

Non-product Outputs (NPOs) – the starting point



Source: PREMAnet e.V.

Economic benefit of addressing NPOs



Source: Wuppertal Institute, Germany

Key takeaways

- It is important to take a systemic approach in addressing multiple challenges including energy cost, compliance to international, national and buyer requirements, as well as integration with other applicable standards
- Energy management is not limited to managing input energy cost, it is important to look at all aspects in Input, Process and Output of the factory
- Start with basic steps of identifying obvious NPOs in the process

Next steps

- Identify stakeholders and functions of your organization that are affected by the requirements of energy management
- Generate awareness among high-level stakeholders of your company to start building a case for energy management

**Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH**

Registered offices
Bonn and Eschborn

Friedrich-Ebert-Allee 32 + 36
53113 Bonn, Germany
T +49 228 44 60 - 0
F +49 228 44 60 - 17 66

Dag-Hammarskjöld-Weg 1 - 5
65760 Eschborn, Germany
T +49 61 96 79 - 0
F +49 61 96 79 - 11 15

E info@giz.de
I www.giz.de