



**Total Resource and Energy Efficiency
Management System for Process Industries**

Apresentador: António Baptista (INEGI)

Workshops SIM4.0

13-15/03/2018 – 14 Março, SANJOTEC, S. João Madeira

SPRE Sustainable Process Industry through
Resource and Energy Efficiency



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Conteúdo



Desafio

Apresentação do projeto

Principais componentes

Próximos Passos

Enquadramento

A Indústria de Processo Europeia é constituída por mais de 450 000 empresas, emprega cerca de 7 milhões de pessoas, e representa cerca de 1600 Milhões Euros de volume negócios

Desafio

“A indústria deve fornecer produtos e serviços com preços competitivos, que satisfaçam as necessidades e qualidade de vida do consumidor, através de compromissos inteligentes entre os desafios económicos e da sustentabilidade”

Objetivo Chave

“FAZER MAIS COM MENOS”!

Technical/Technological Gaps

- **Falta de ferramentas simples para avaliação e otimização da eficiência de recursos e energia, que integrem aspetos operacionais, económicos e ambientais.**
- **Conhecimento insuficiente sobre como valorizar desperdícios (Energia, Recursos, etc.)**

Management Gaps

- **Não incorporação de aspetos da sustentabilidade na estratégia das empresas**
- **Dificuldade na definição clara e consistente de KPIs, e seu acompanhamento**
- **Dispersão de dados** relevantes do processo por vários departamentos da empresa

Organizational Gaps

- **Dificuldade na recolha e partilha de informação sobre os fluxos de processo** (consume de recursos e energia, bem como, desperdícios e emissões;
- **Inexistência de meios para mapear e partilhar de recursos** (energia, água, desperdícios e materiais reciclados) **entre unidade produtivas dentro de uma empresa ou entre empresas num parque industrial;**



Total Resource and Energy Efficiency Management System for Process Industries

Duração: Set-2015 | Aug-2019

Programa de financiamento: Horizonte 2020 | SPIRE 6 2015

Orçamento : EUR 5,673,356.13

Website: <http://maestri-spire.eu/>

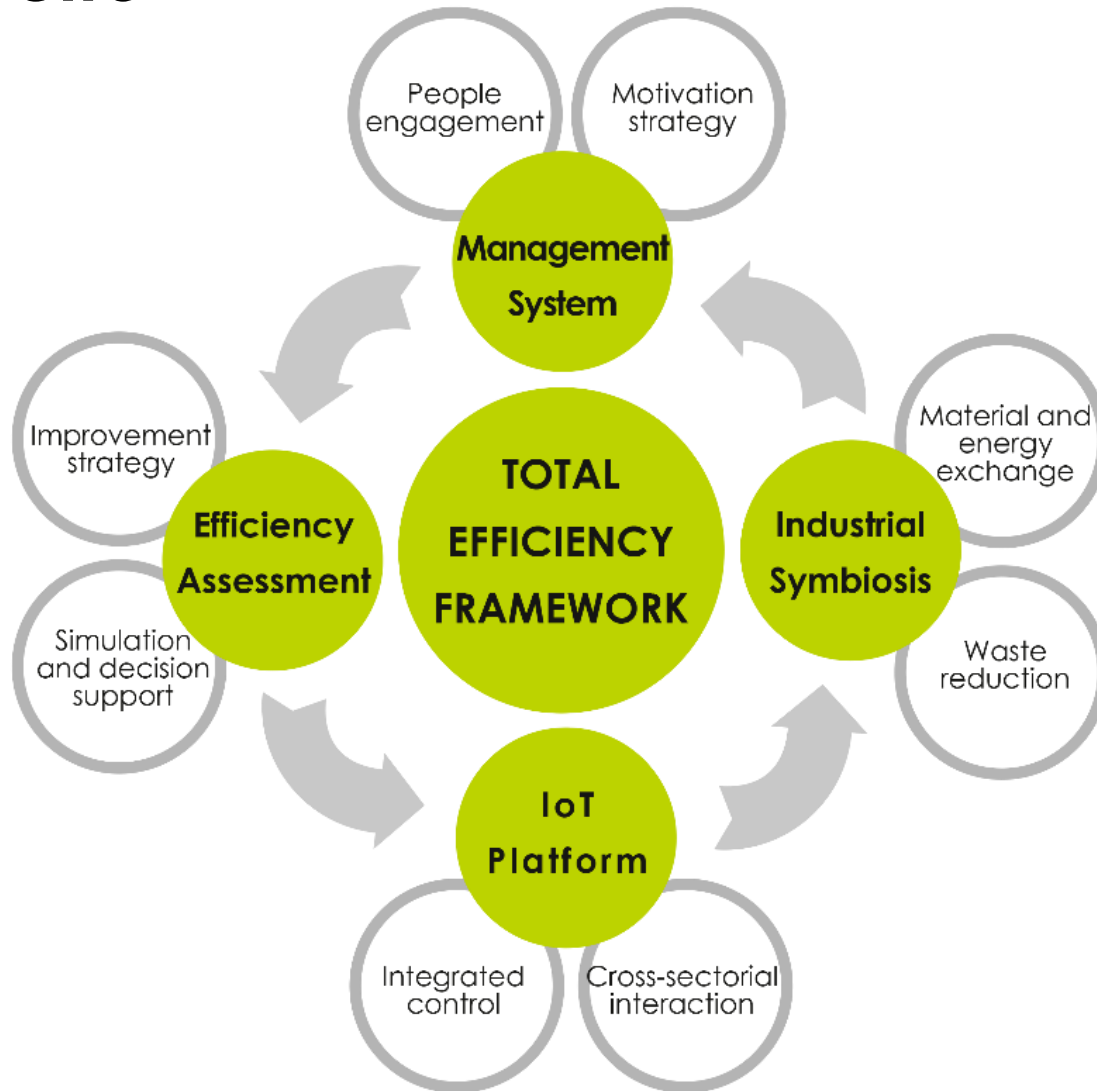


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Conceito



Consórcio

15 parceiros | 5 países



Coordinator



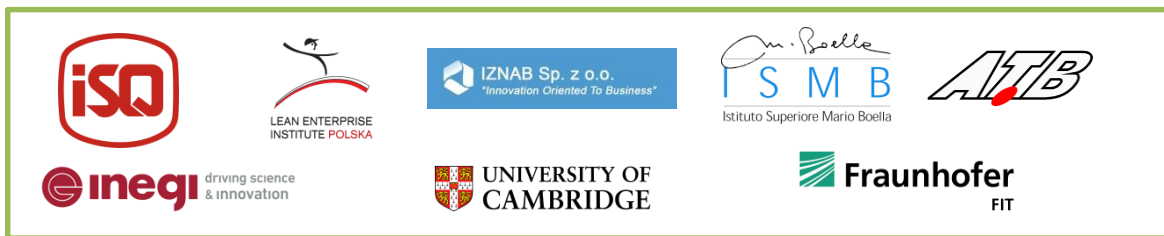
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Consórcio

Framework Developers



System Integrators



Industry

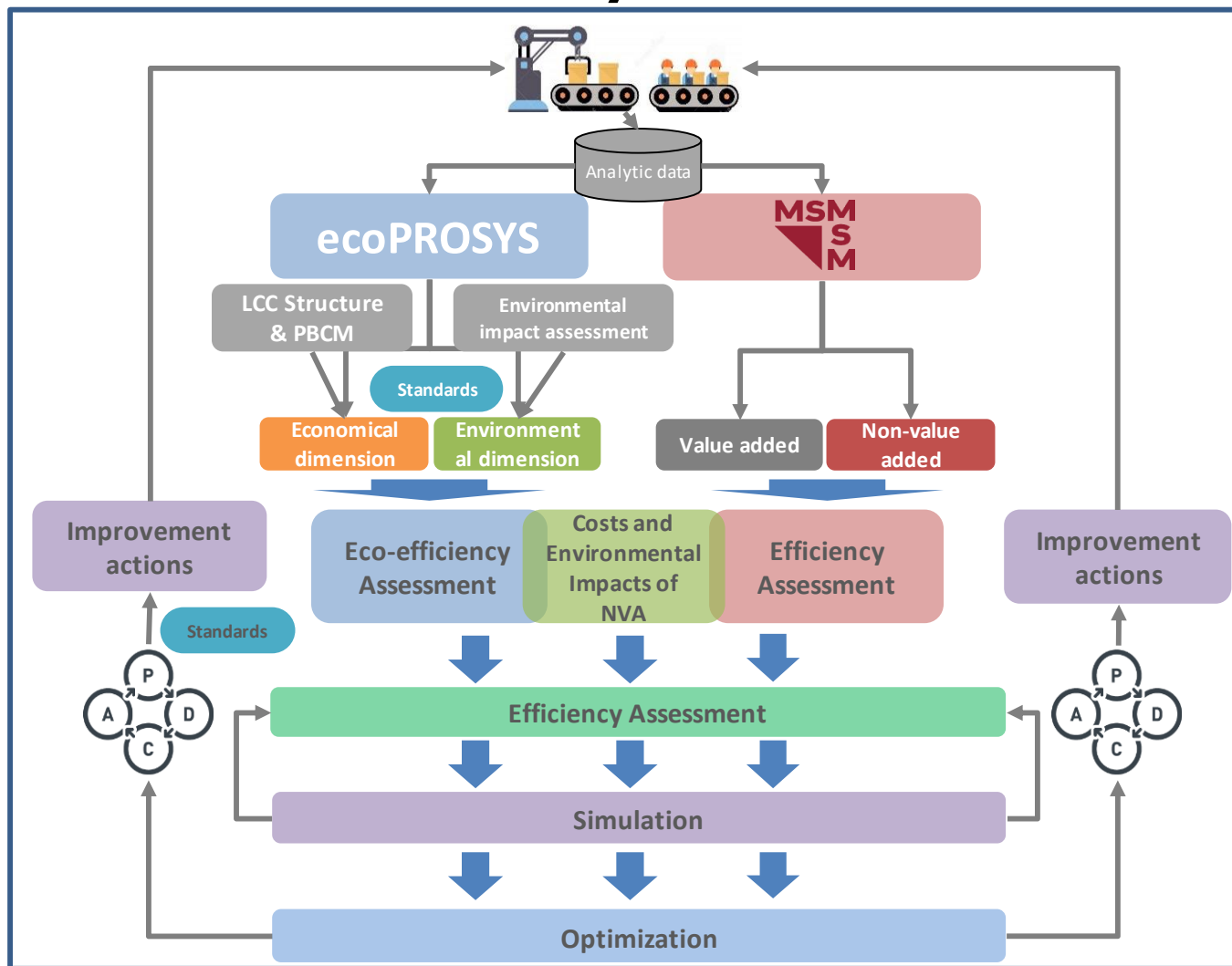


Parceiros Industriais

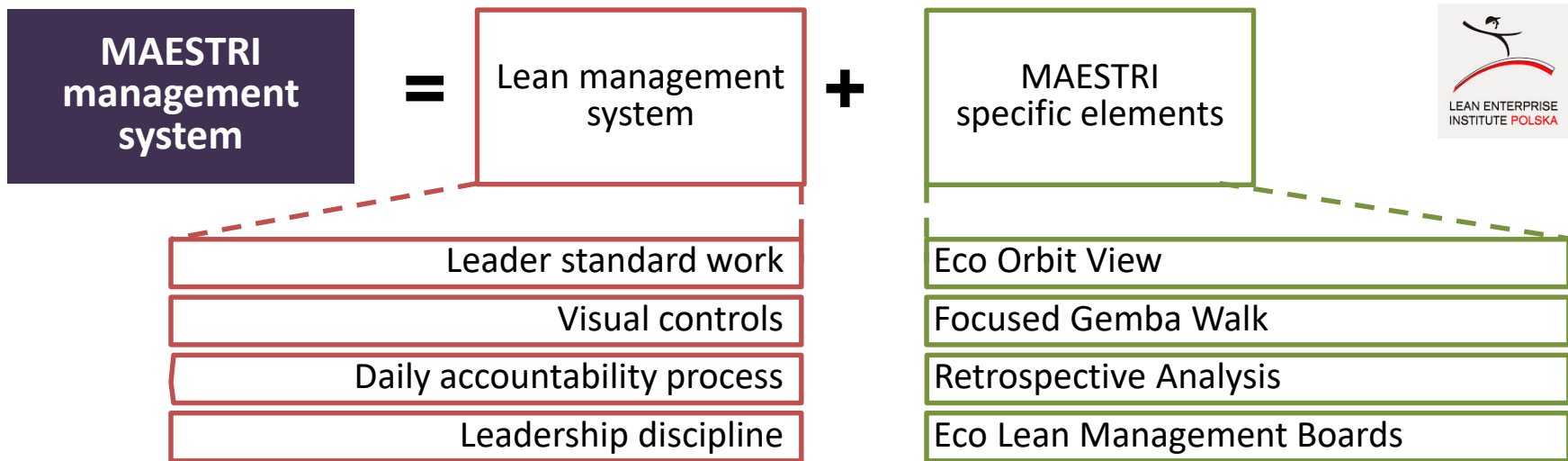
- Injecção de Plástico
- Metalomecânica
- Produtor de tintas
- Produtos químicos base



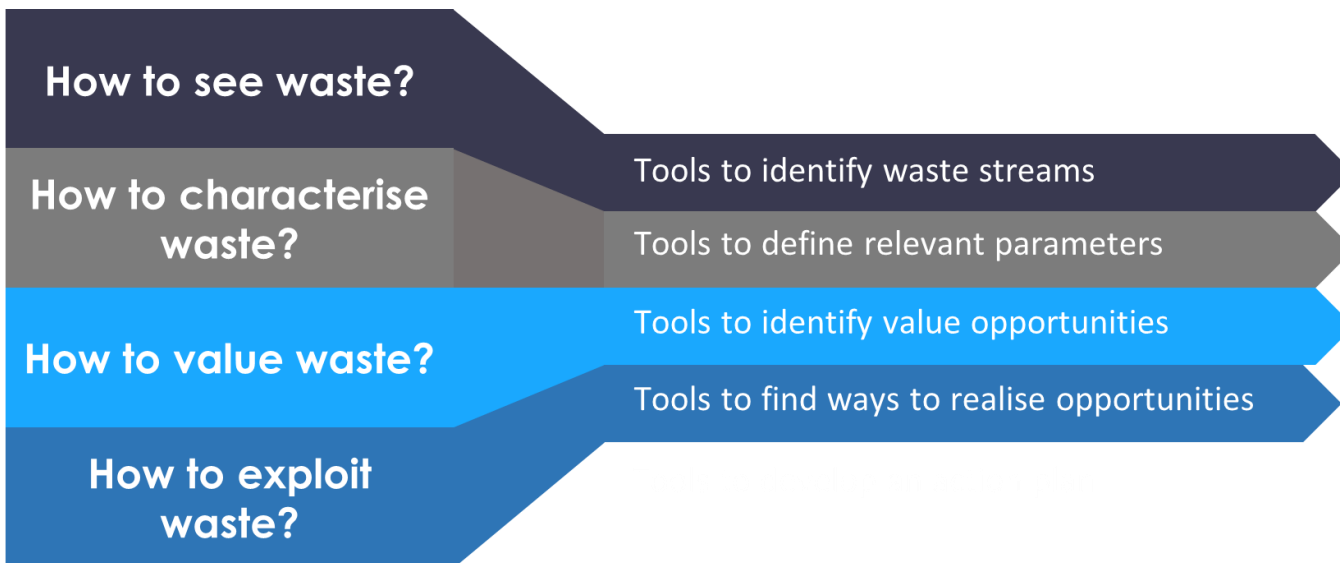
MAESTRI efficiency assessment



MAESTRI management system



MAESTRI industrial symbiosis



UNIVERSITY OF
CAMBRIDGE



Build a library of case studies

Collect a set of different case studies of Industrial Symbiosis and made them available through MAESTRI dissemination platforms

Build an open source waste database

Create a database of exchanges, based on findings from the analysis of case studies. This database will inform MAESTRI management system

Develop a toolkit for Industrial Symbiosis

Create, test and refine a set of tools to support Industrial Symbiosis activities, in particular companies could use the toolkit to identify opportunities to obtain higher value from their waste.

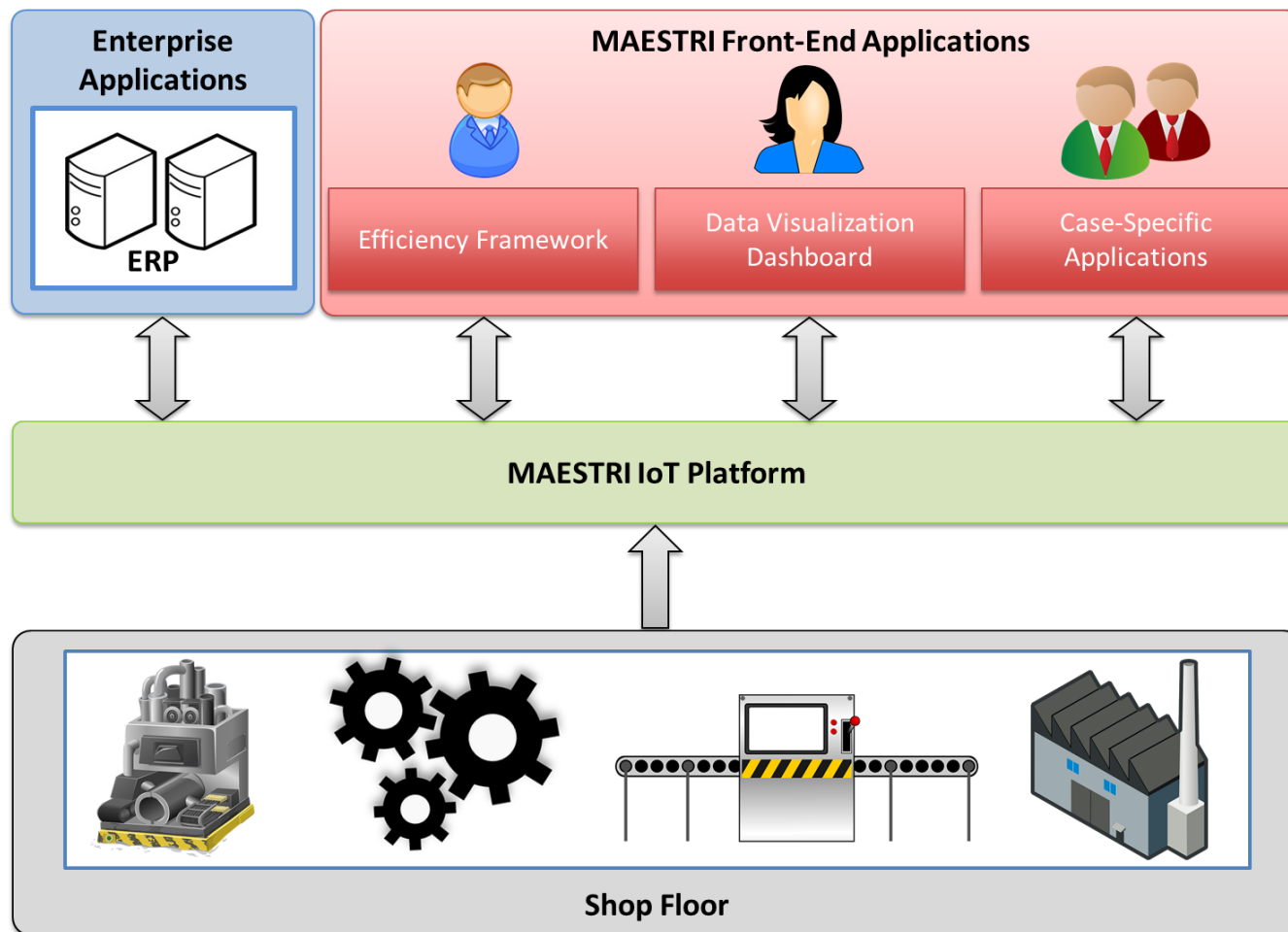


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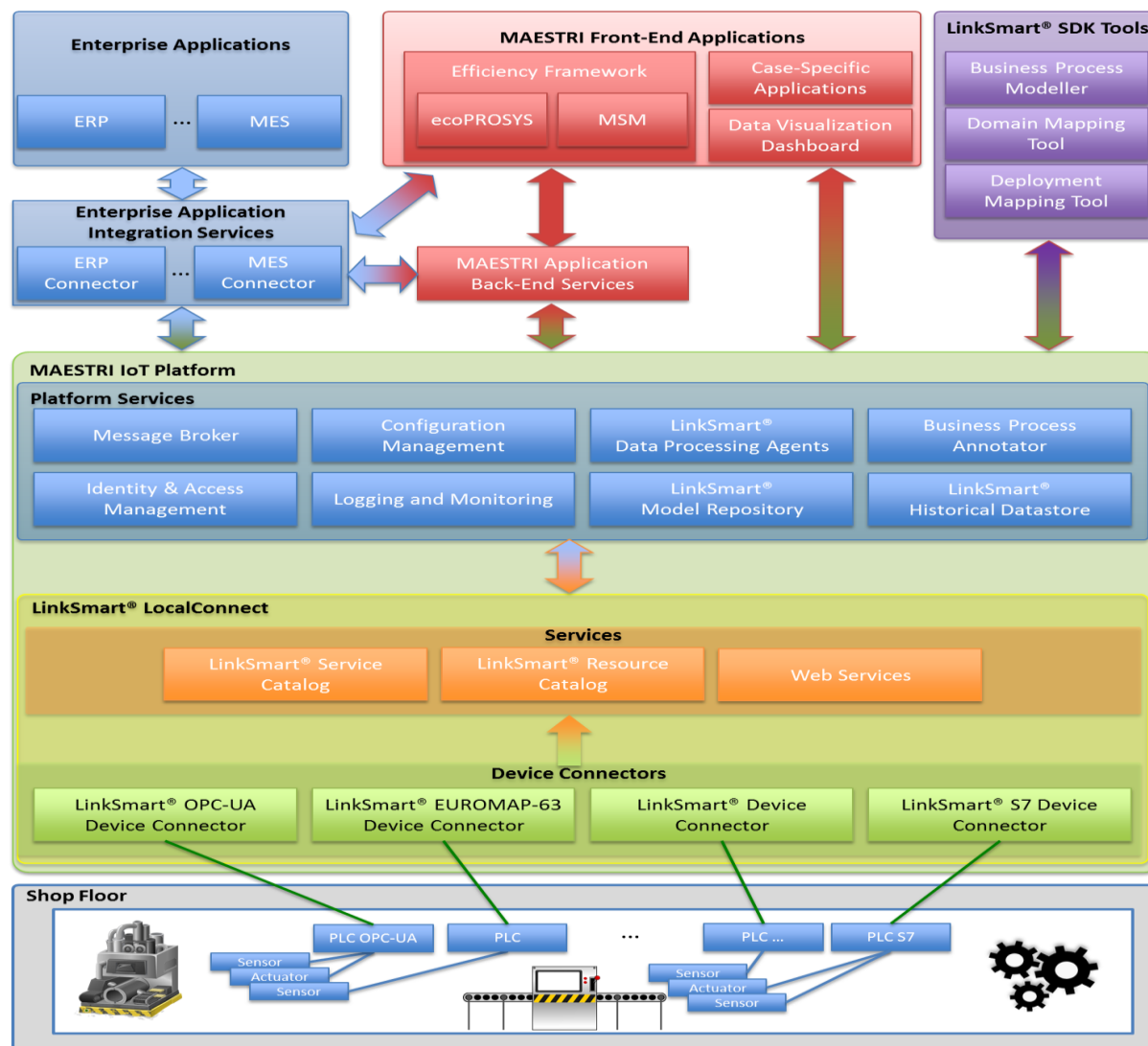


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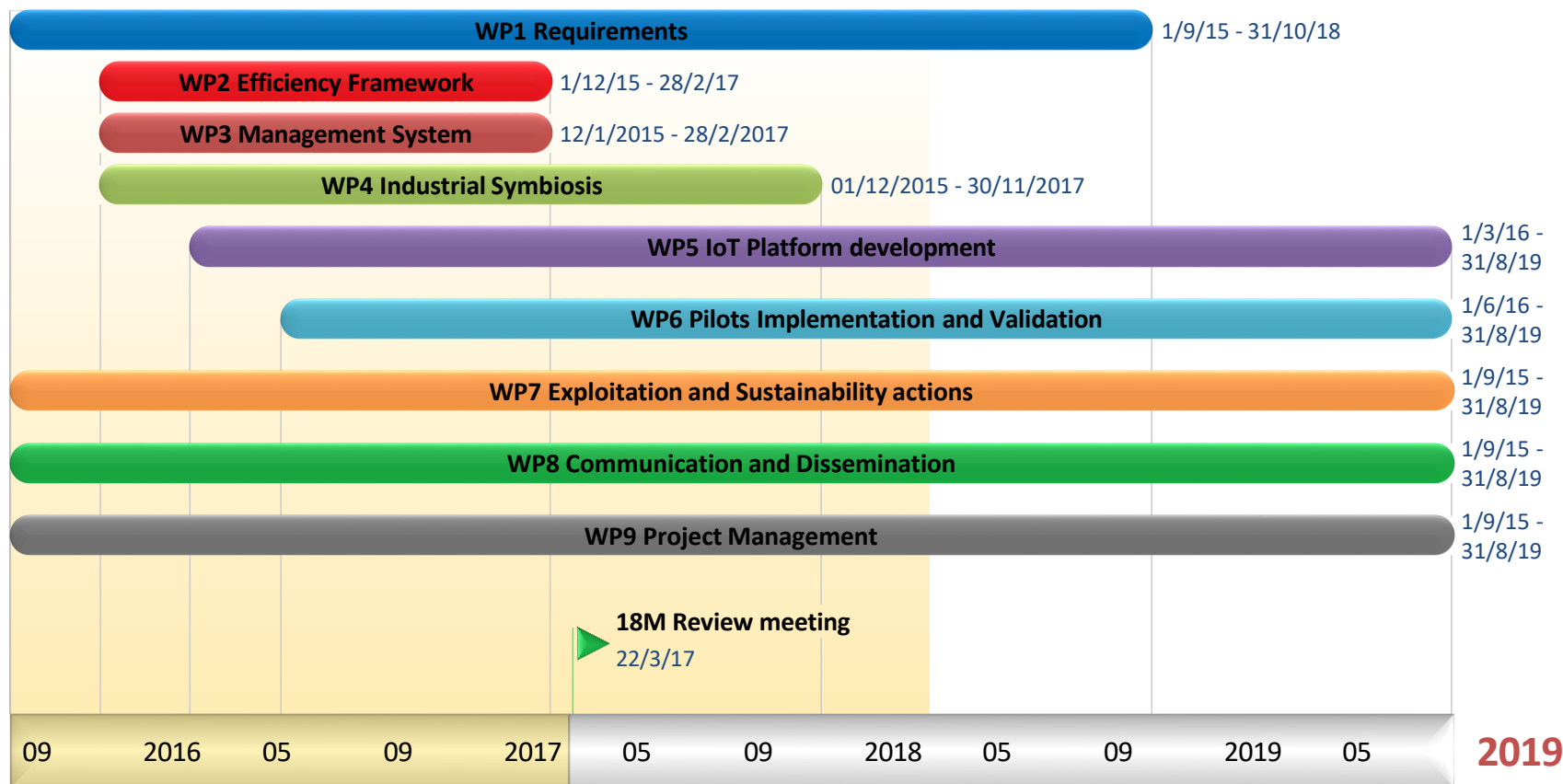
MAESTRI IoT platform



MAESTRI IoT platform



Onde estamos



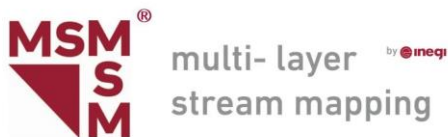
Resultados já disponíveis / em implementação

- Novos Módulos de SW ecoPROSYS e MSM – Multi-Layer Stream Mapping (já disponíveis)



Resultados já disponíveis / em implementação

- Implementação em curso nos pilotos MAESTRI
- Resultados já de externalidades com aplicação:
 - Projeto **CleanSky2, PASSARO** Piloto **AIRBUS DEFENSE & SPACE**
 - PROJETO H2020 SPIRE **SCALER**
 - PROJETO H2020: **BEinCPPS** (i4.0 Experiment)



Próximos passos MAESTRI

- Concluir a implementação da Plataforma MAESTRI nos 4 Pilotos (GLN, MCG, JWO, Worlee)
- Avaliar, priorizar e implementar ações de melhoria
- Testar e validar a Plataforma MAESTRI e ferramentas de ecoeficiência, incluindo análise de custos
- Continuar disseminação e exploração dos resultados

OBRIGADO

<https://maestri-spire.eu/project/>

Coordinator



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