

What is WCM ?

**It is our
“Continuous
Improvement
System”**

➤ **Founded in TPM**



What is World Class Manufacturing?

WCM is a mindset based on a continuous improvement approach

WCM has its foundations in the Total Productive Maintenance (TPM) a maintenance process developed in Japan for improving productivity by making processes more reliable & less wasteful



Kaizen
改善

What is TPM ?

Total **P**roductive **M**aintenance

- ▶ **Origins. 1970s in Japan. Developed by JIPM**
- ▶ **A System emphasizing complete Care (Maintaining) of machines delivered dramatic results ...**

TPM = WCM

- ▶ **Zero BDs, Zero Defect and Zero Accident.**

Japanese Institute of Plant Maintenance

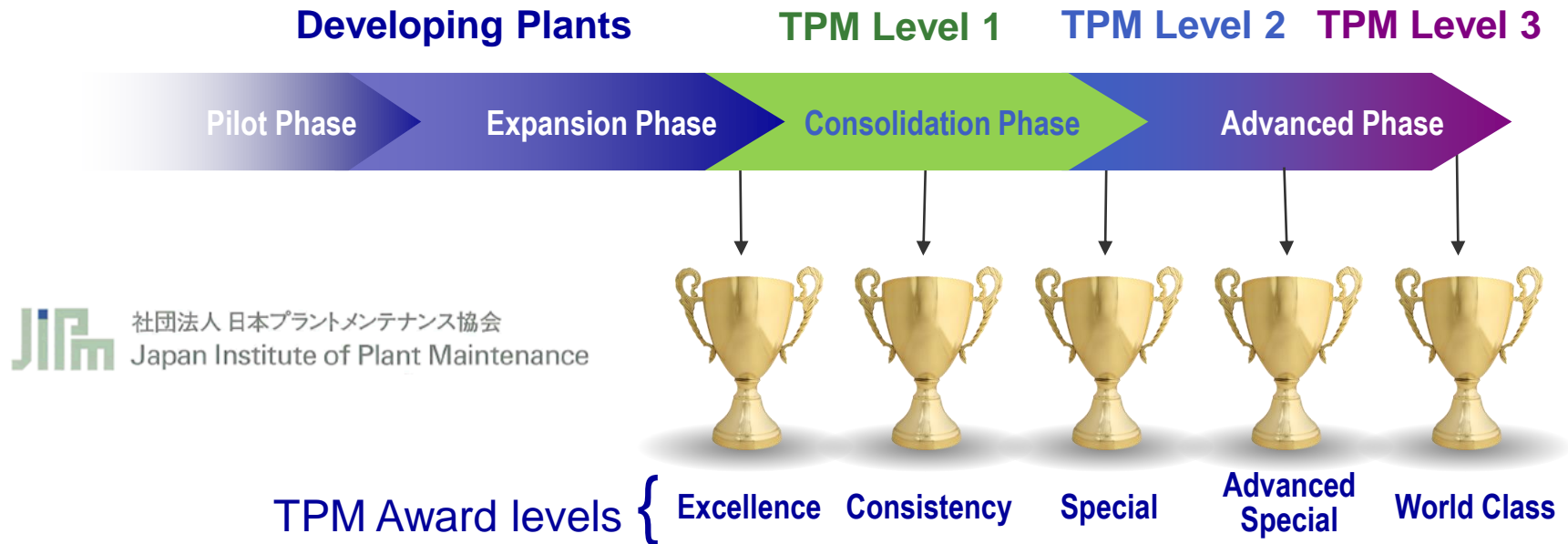
JIPM

- ▶ Established in 1969
- ▶ Non-Profit, Government Organization linked to Ministry of Industry and International Trade.
- ▶ Develops and promotes TPM.
- ▶ Since 1971 auditing and presenting awards for TPM Achievement (since 1991 Internationally).

- ▶ Audits are a Stepwise process with a progression of awards levels (5 in total) from TPM Excellence Award to TPM World Class Award.
- ▶ Consulting support via their "sister company" JiPM-S (Solutions) which is an independant consulting company.

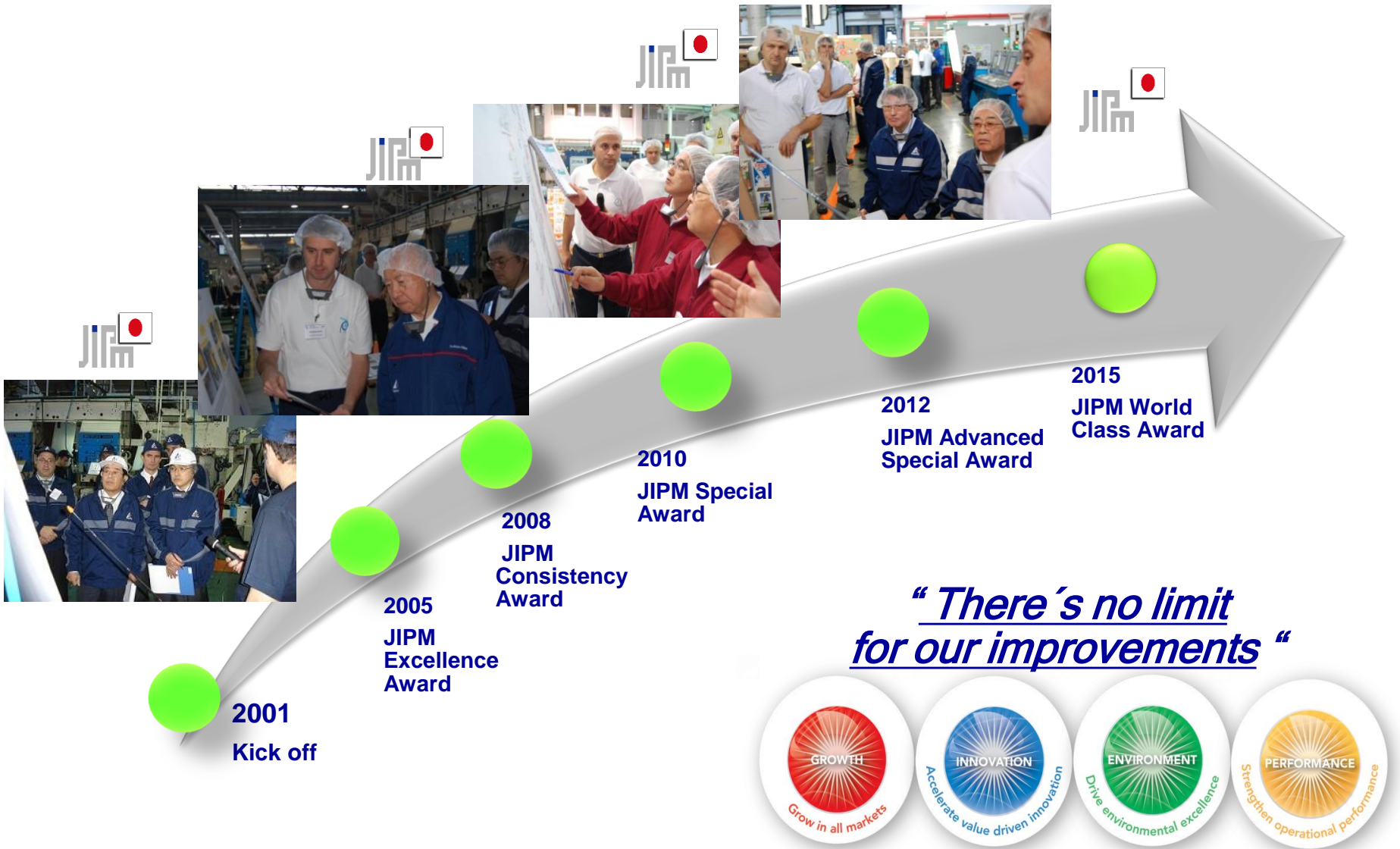
External recognition for excellence

JIPM Total Productive Maintenance Awards



- ▶ The award system judges the results of a plant's TPM activities. On average, it takes about 10 years to go from the first to final level.

WCM Journey

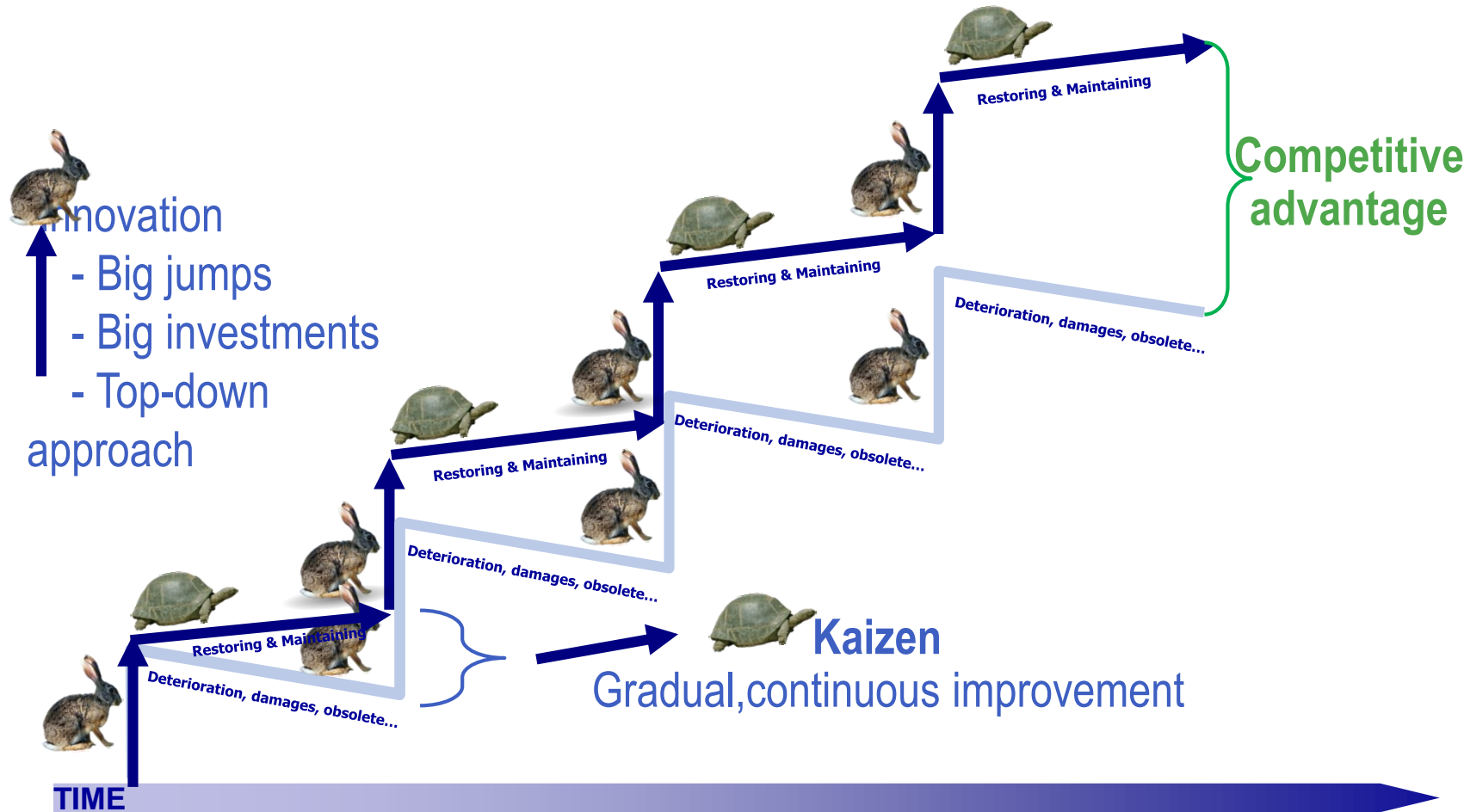


WCM Principles

What makes WCM being different !

Innovation and Kaizen

WCM approach to gain the competitive edge



WCM basic principles

A large, three-dimensional red number '0' with a slight shadow underneath, positioned on the left side of the slide.

- ▶ Zero Accidents , Zero Breakdown,Zero Defects,Zero Scrap,
- ▶ Continuous improvement through loss eradication
- ▶ No type of waste is accepted
- ▶ Methods for improvements are applied strictly

A large, three-dimensional red number '100%' with a slight shadow underneath, positioned on the right side of the slide.

- ▶ Voice of customer is heard to the last level in the organization
- ▶ People are the driving force of change
- ▶ Motivating environment
- ▶ All faults are visible

Our Mission

To add value to our Business and Customers
by driving for a Zero Loss Organisation

HOW ?

.....through the continuous development of:

- ✓ People
- ✓ Processes
- ✓ Organization



Our Strategy

➤ **Develop People**

- Training
- Coaching
- Empowering people for self learn

➤ **Develop Processes**

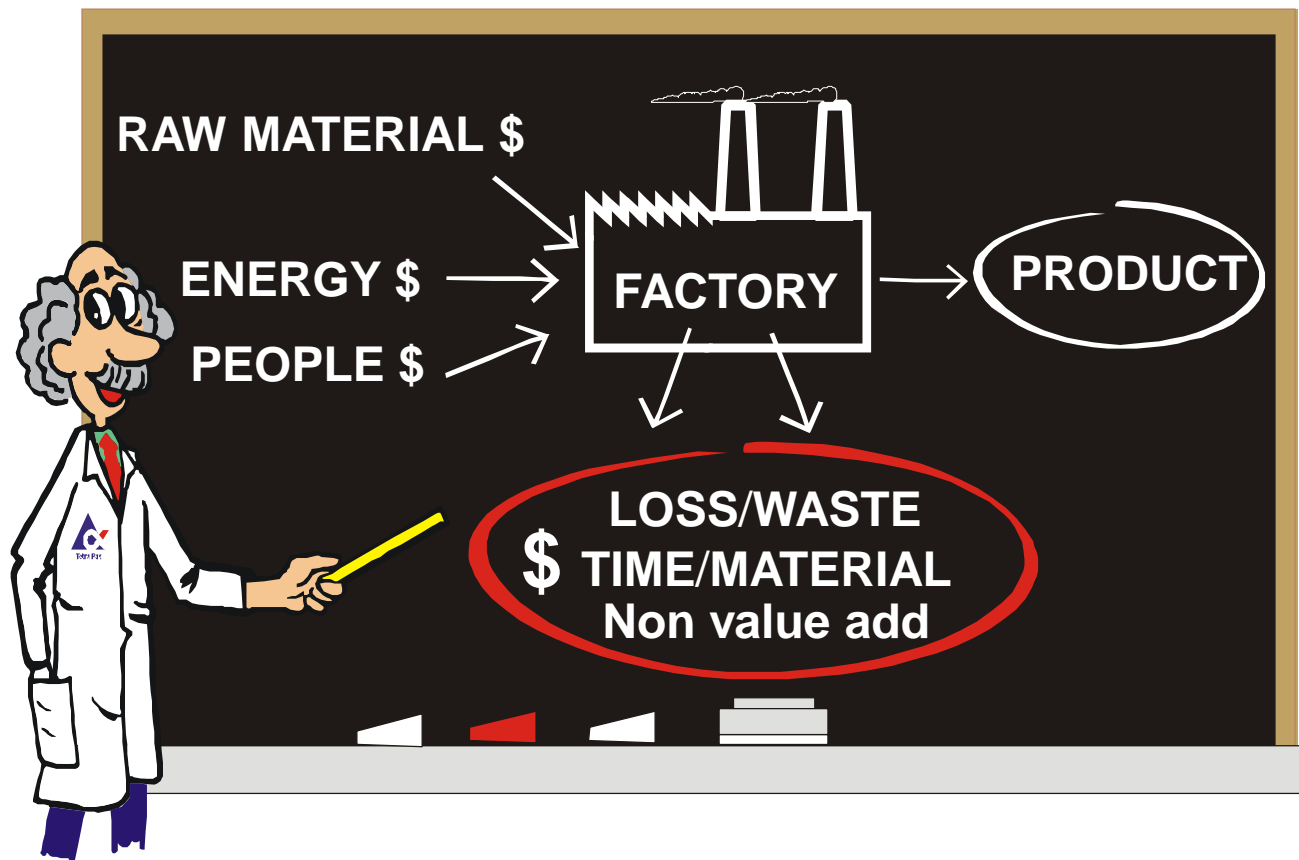
- Standardize and align methods and tools
- Transfer WCM knowledge sharing best practices

➤ **Develop Organization**

- Promote WCM people integration
- Keep WCM community alive

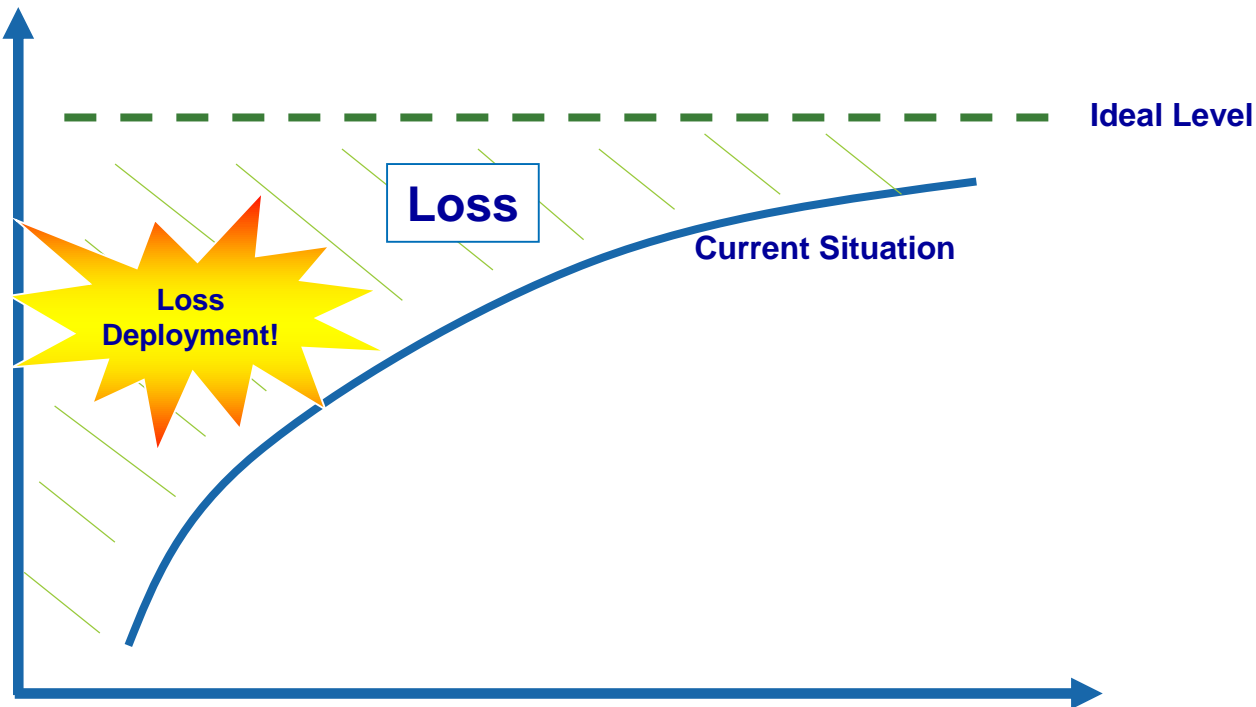
What is a Loss?

- ▶ Something we do that doesn't add any additional value to the final customer's product
- ▶ It is often perceived as inevitable
- ▶ It can be eliminated ... for the most part



What is a Loss – specifically ?

It is the difference between the current situation and the ideal situation

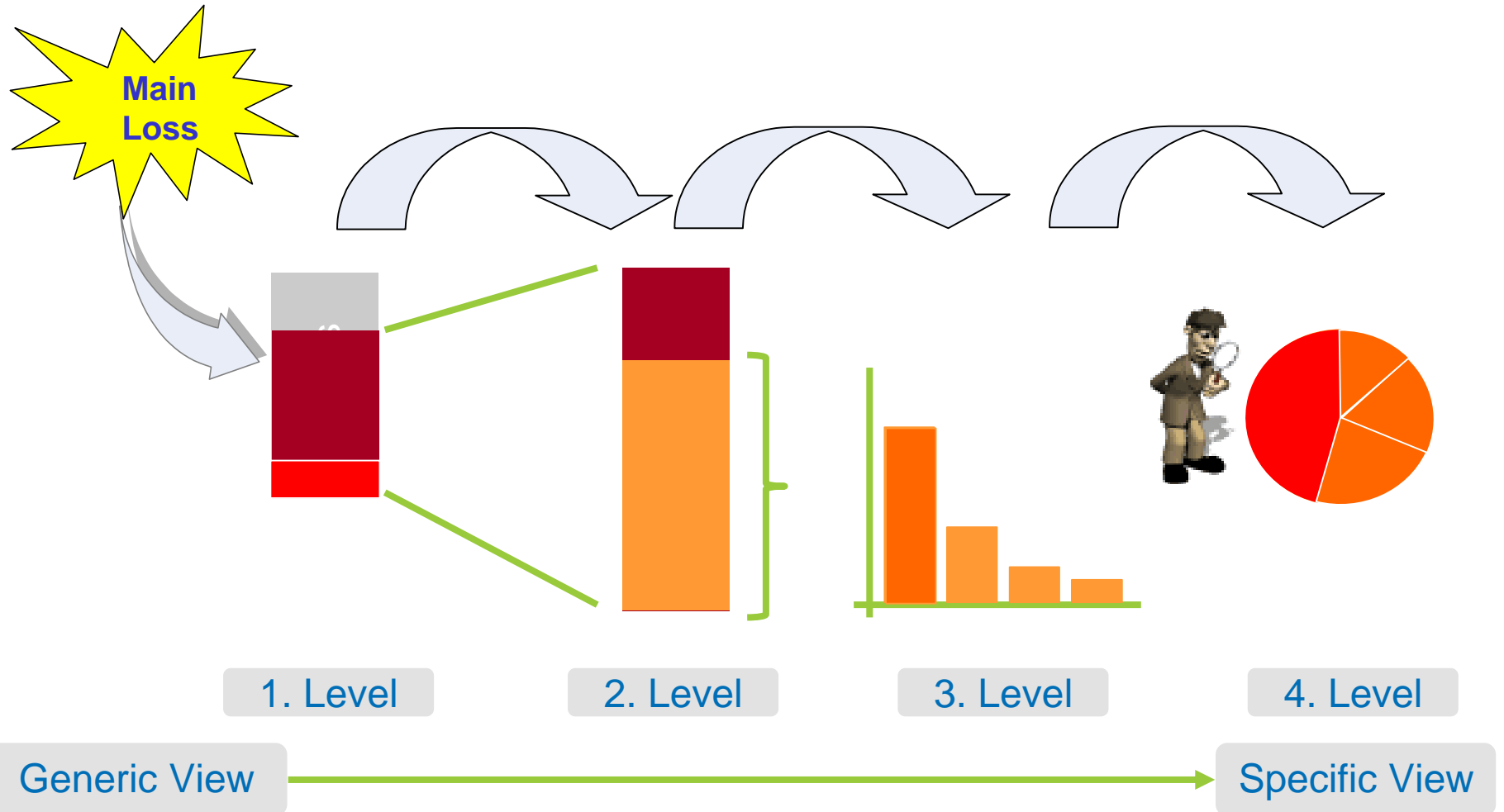


Steps to have a good losses understanding:

- Clear measurement (KPIs and Data Collection)
- Clear definition for the ideal situation (Zero Loss Level)
- KPI Loss Tree (Different Levels of losses – more details)
- Clear understanding of biggest losses (Launch teams)

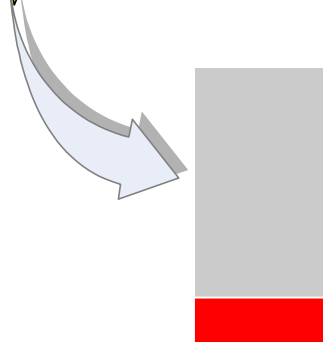
Deployment

Within the loss you need to identify all different failure modes!

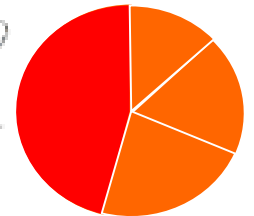


Concept of the Small Steps

Within the loss you need to identify all different failure modes!



How to eat the elephant?



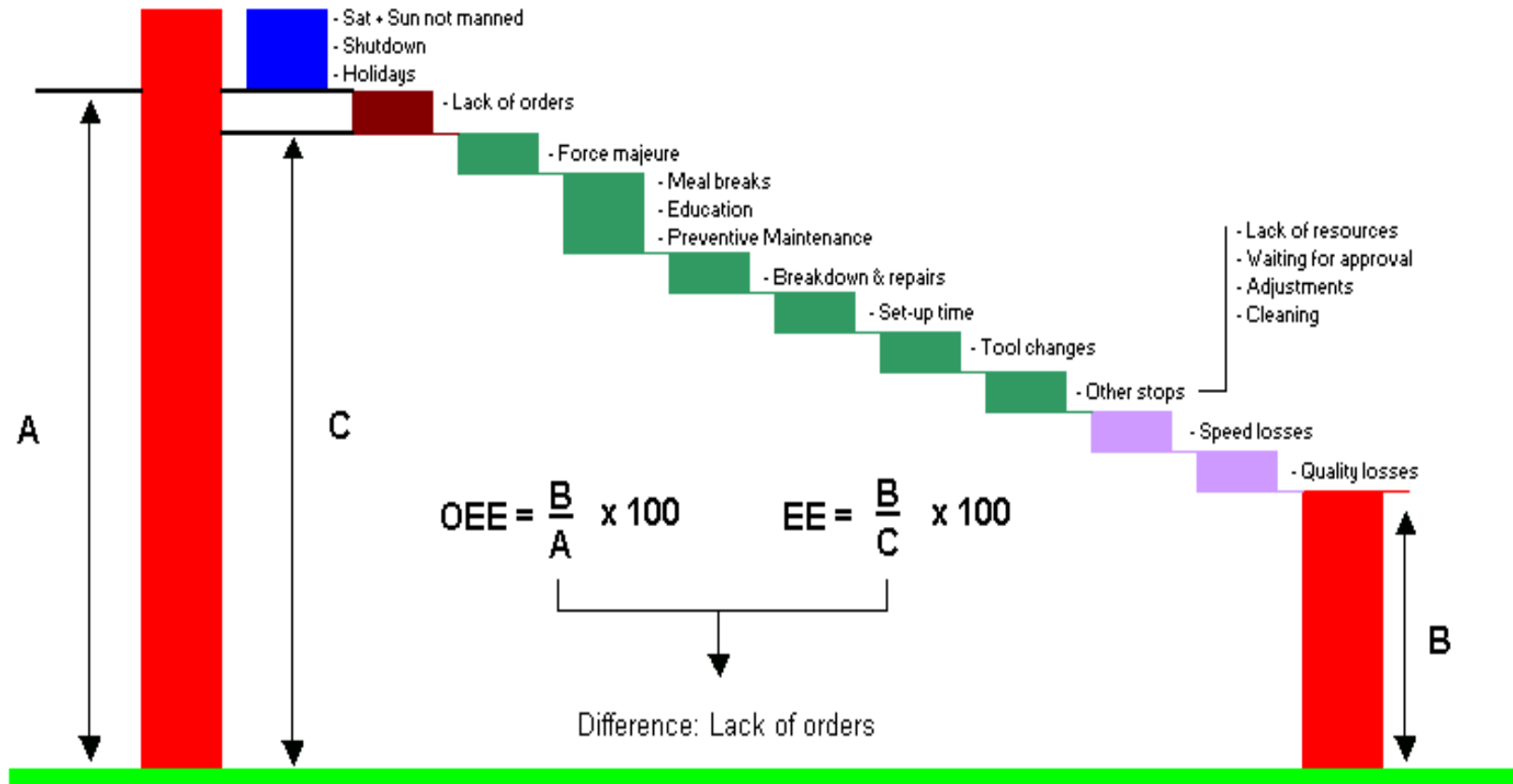
Bit after bit!

Generic View

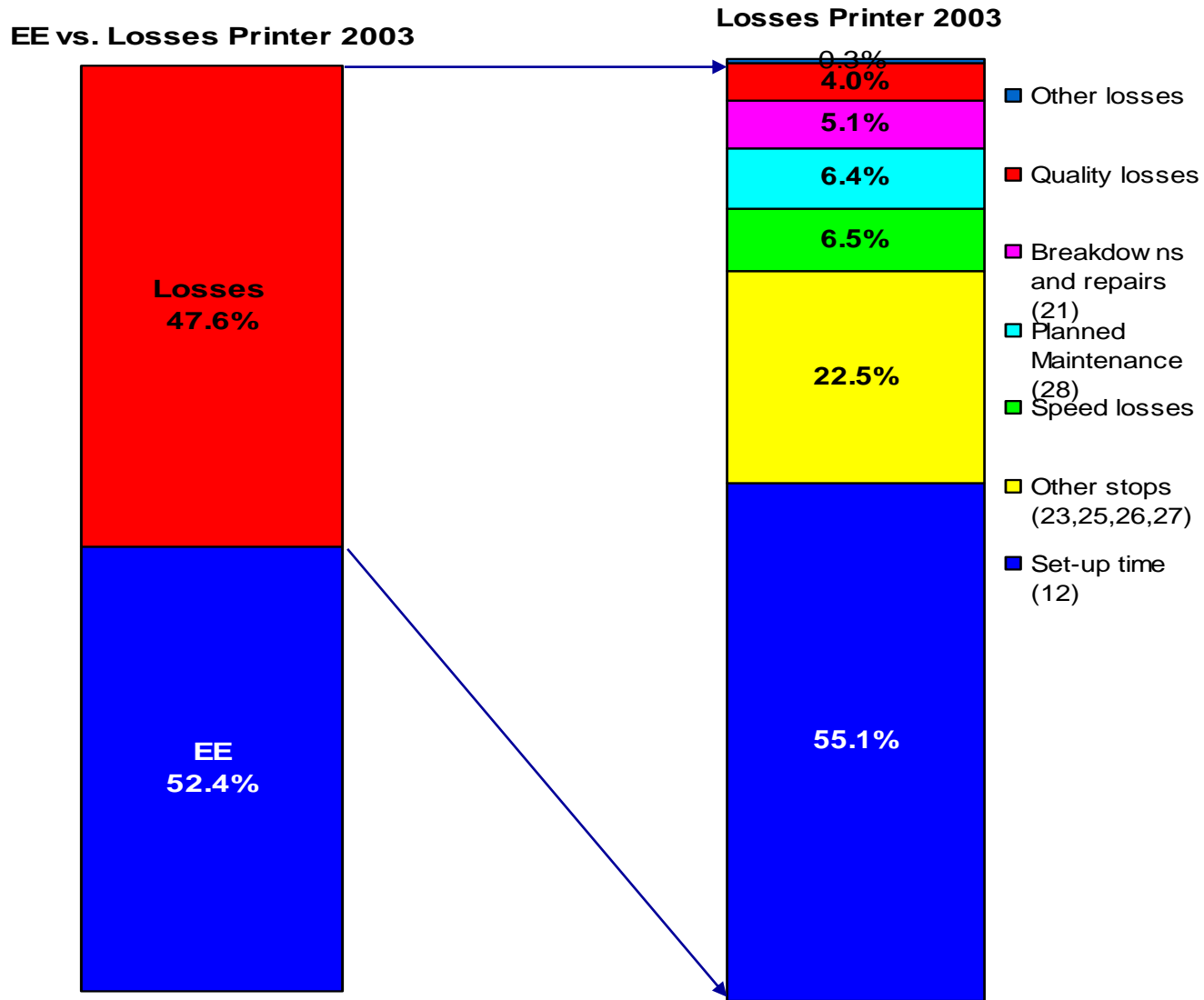


Specific View

Equipment efficiency

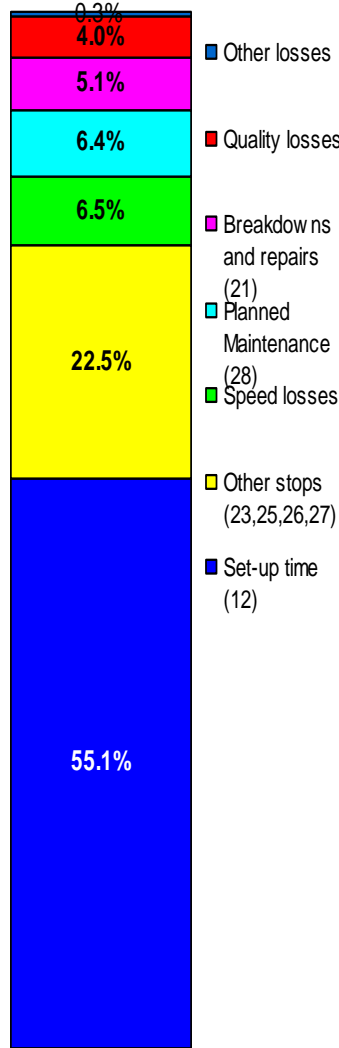


Print - deployment of losses - example

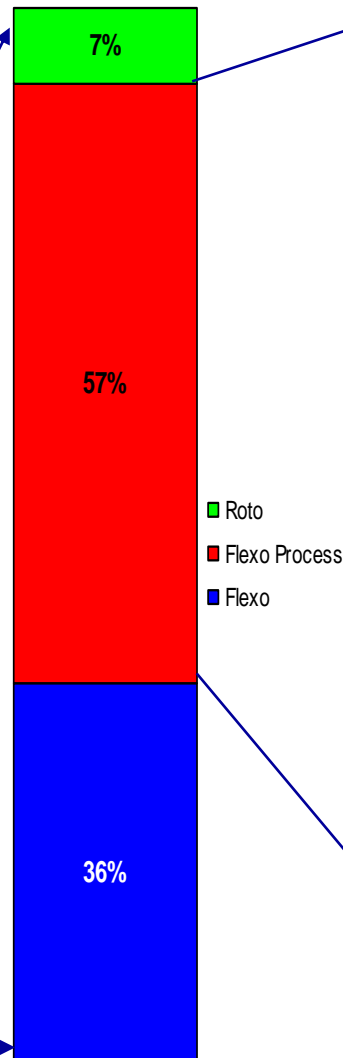


Print - deployment of set up time

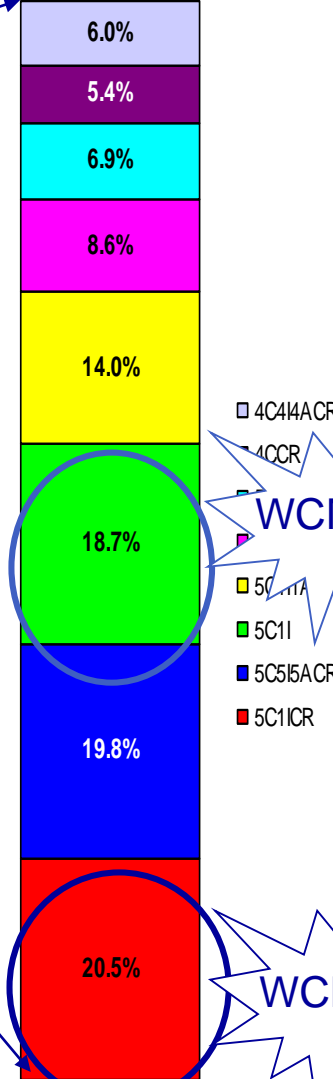
Losses Printer 2003



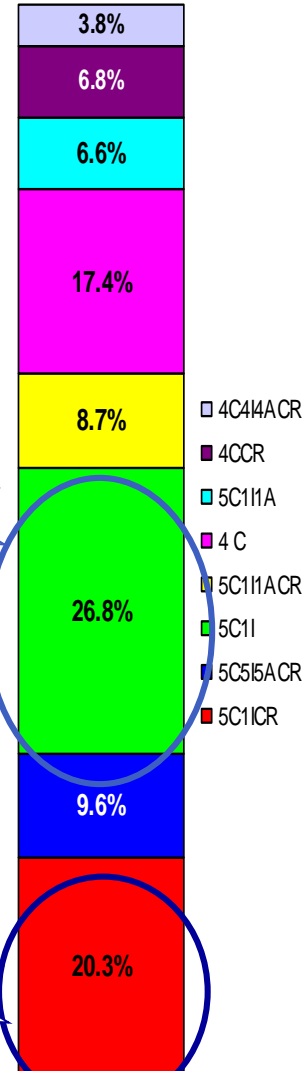
Set up losses Printer 2003



Set up time deployment FP2003



Set up frequency FP 2003



WCM tim

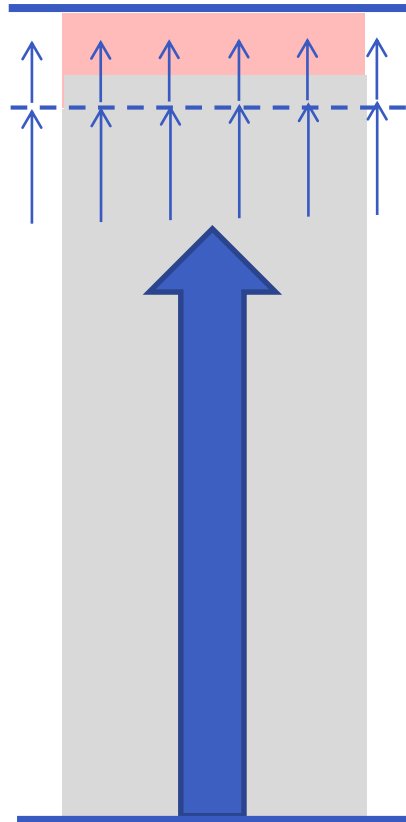
WCM tim

“LOSSES” are the Key

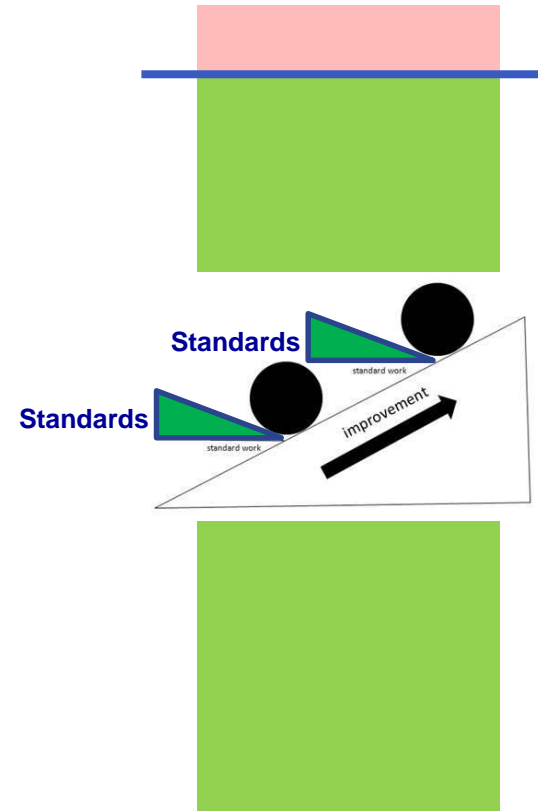
The Base of the Continuous Improving in WCM



Situation

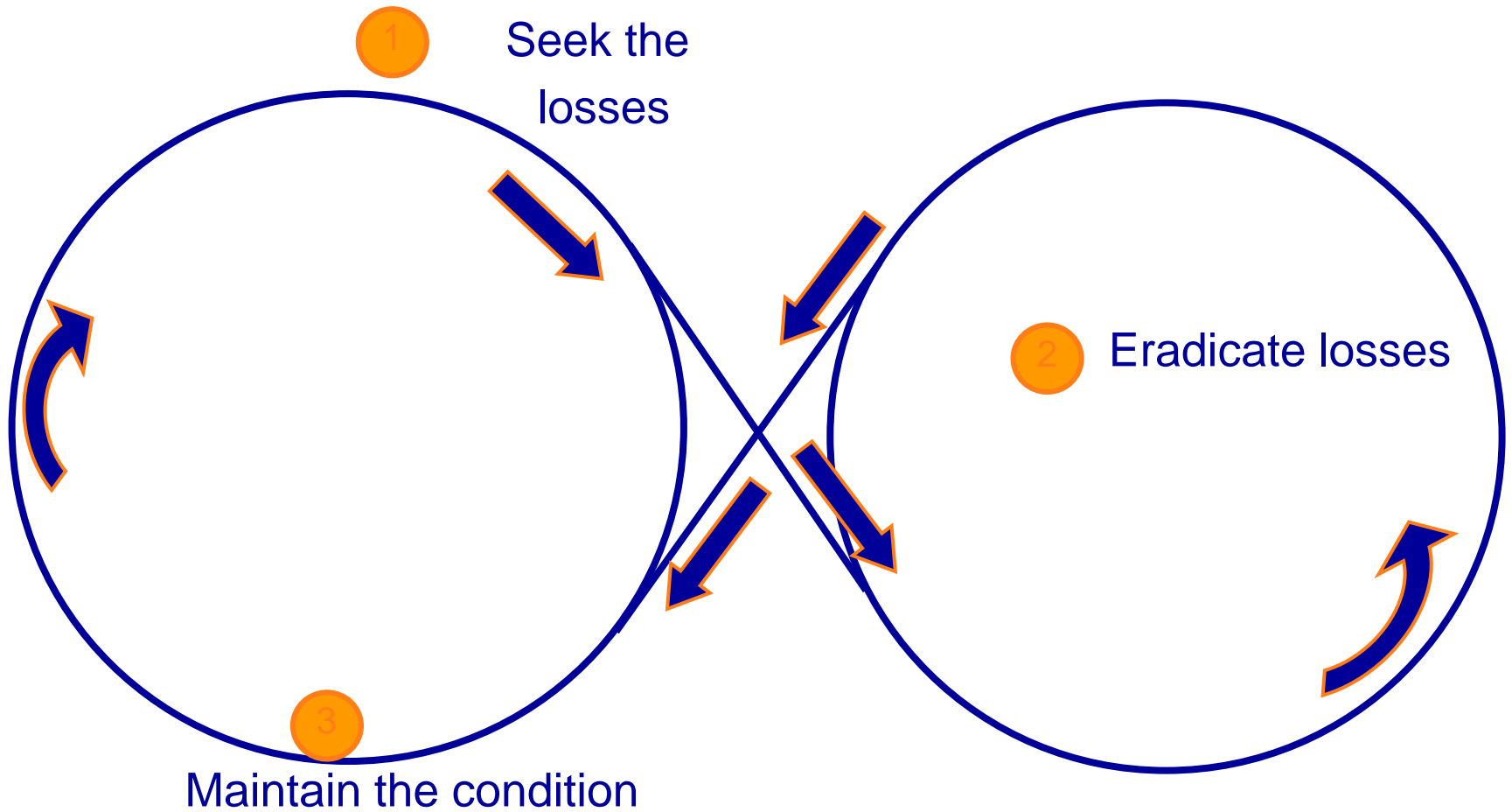


Eradicate



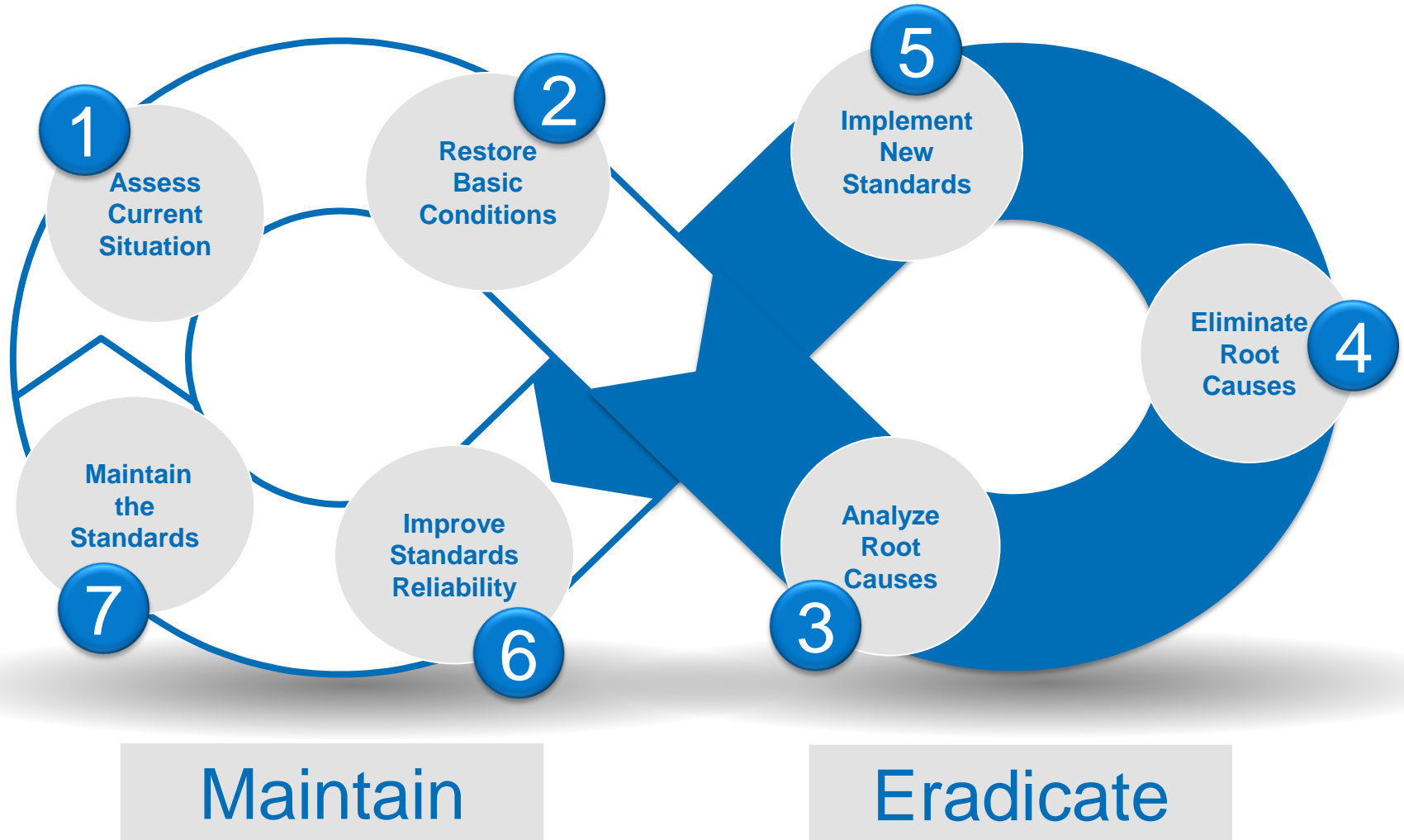
Maintain

The WCM Infinity Loop



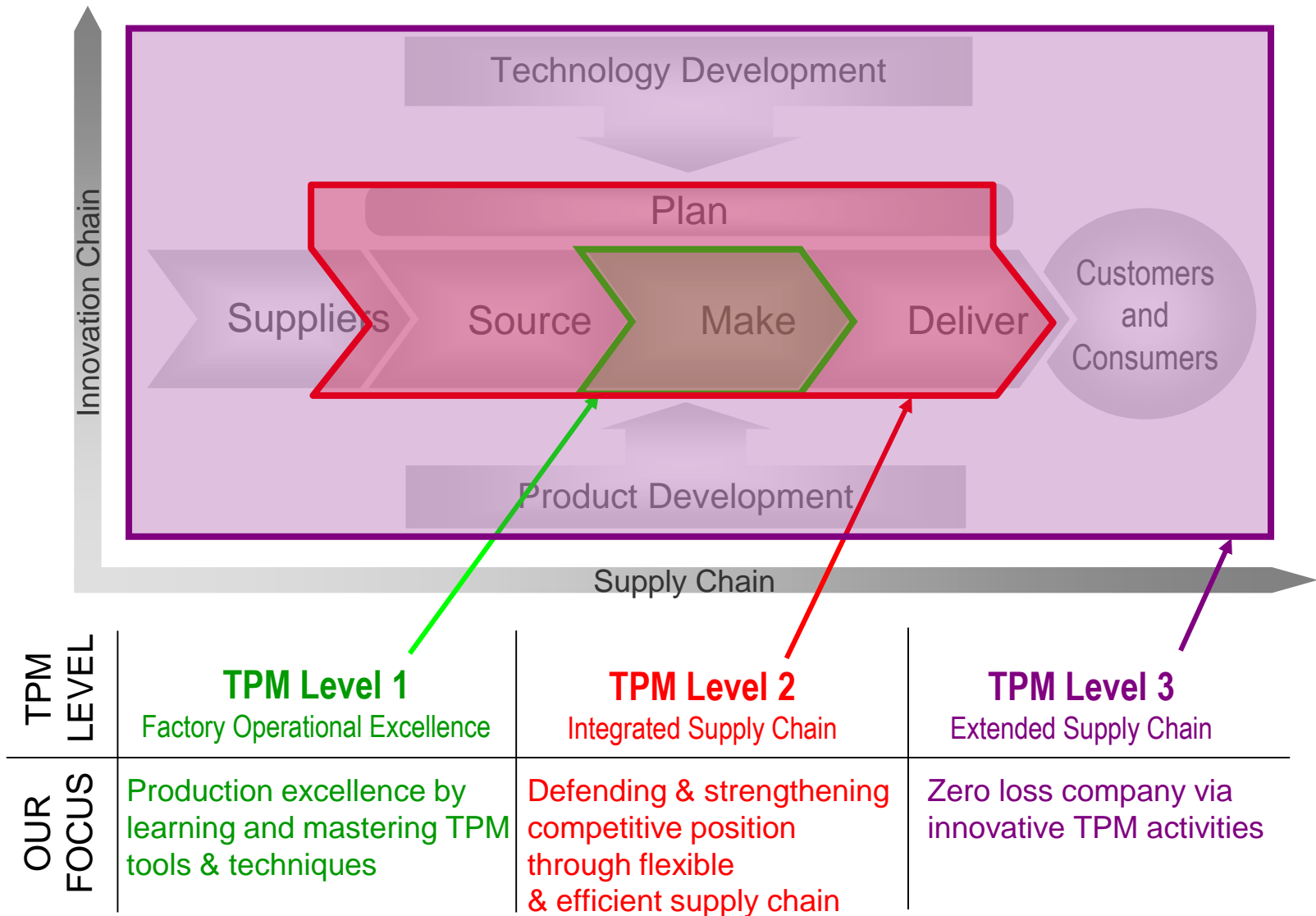
The Infinite Loop

The Base of the Continuous Improving

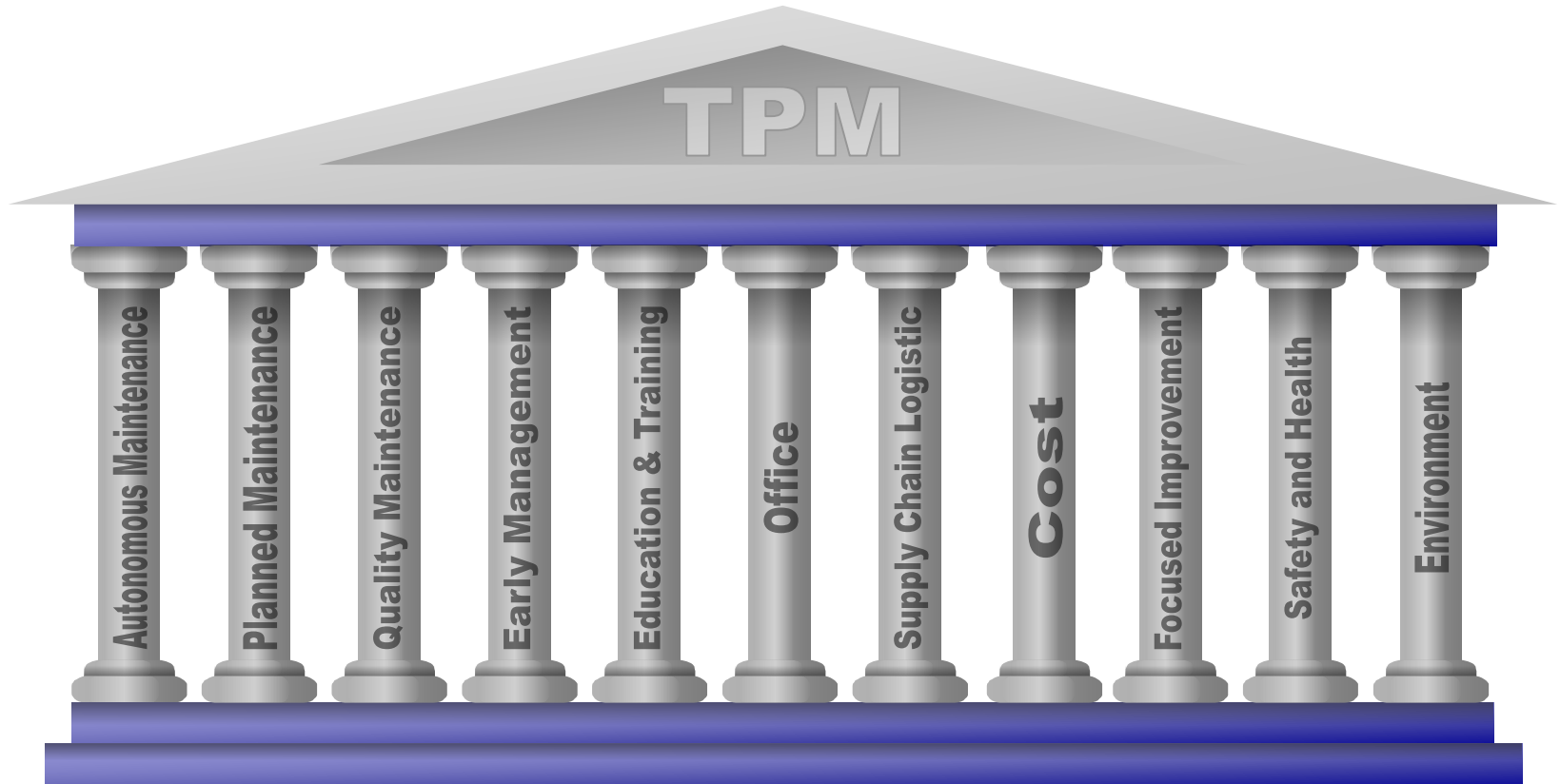


The three TPM Award levels

Linked with business as a whole in a logical expansion



Our 11 Pillars of WCM



Each Pillar

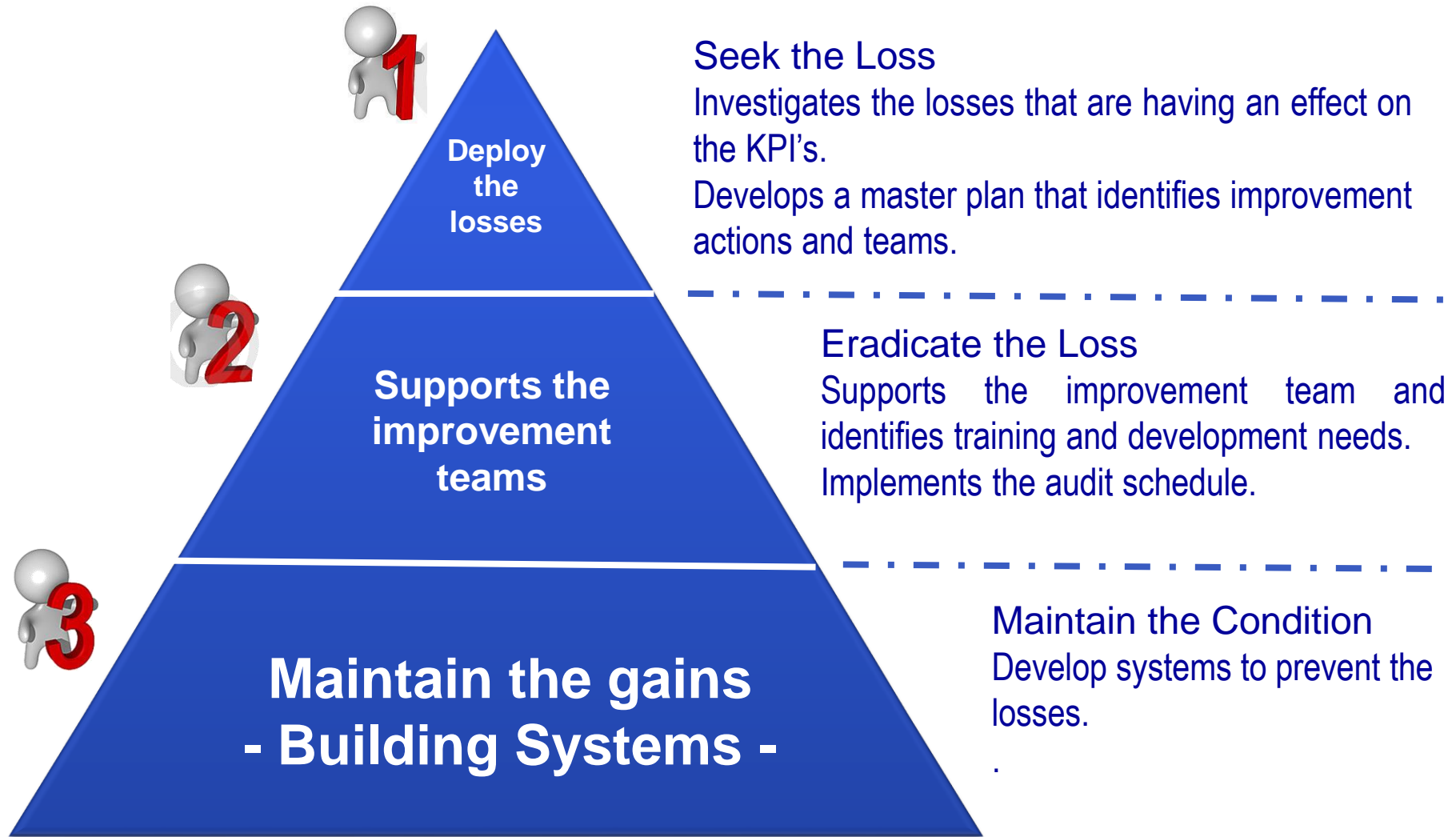
- Focuses on Common Themes/ Losses
- with Expertise in specific Methods and Tools

Pillar Activities

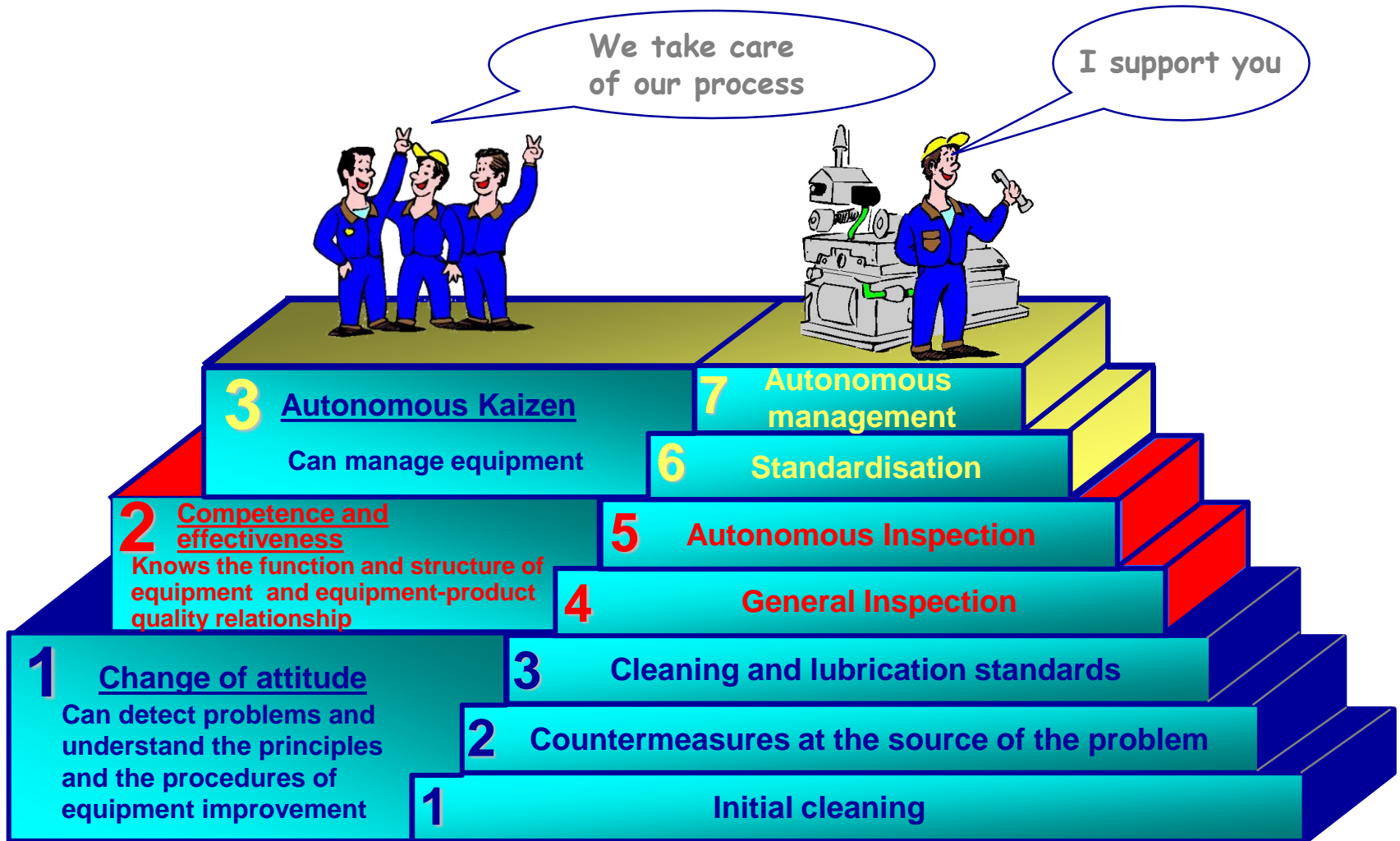
These are the typical activities carried out by all Pillars

- Deployment
- Potential gains
- Planning teams
- Evaluation resources
- Training
- Support
- Audits
- Monitoring results

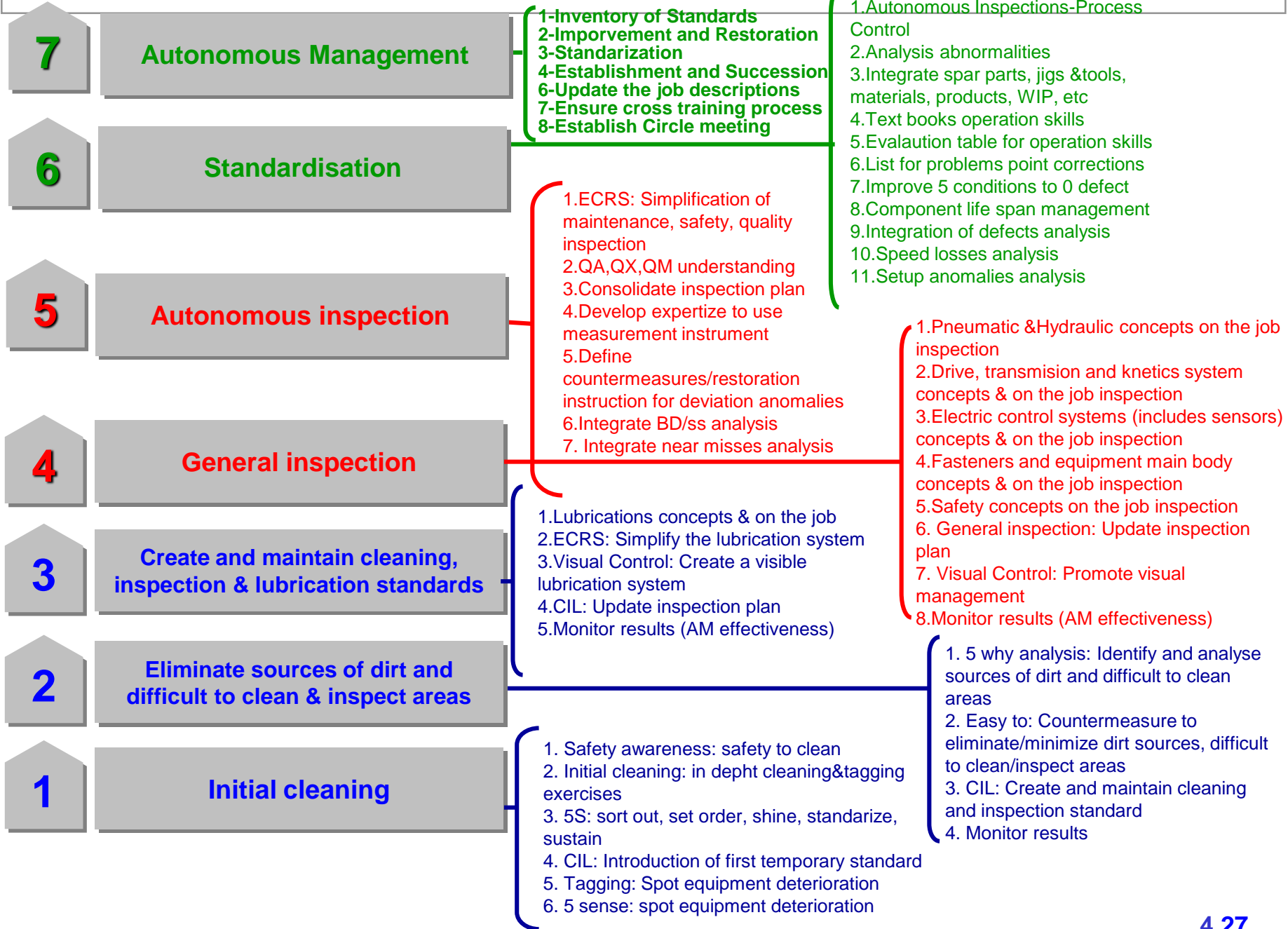
Pillars Support on Three Levels



AM Man - Machine development



The route for Autonomous Maintenance

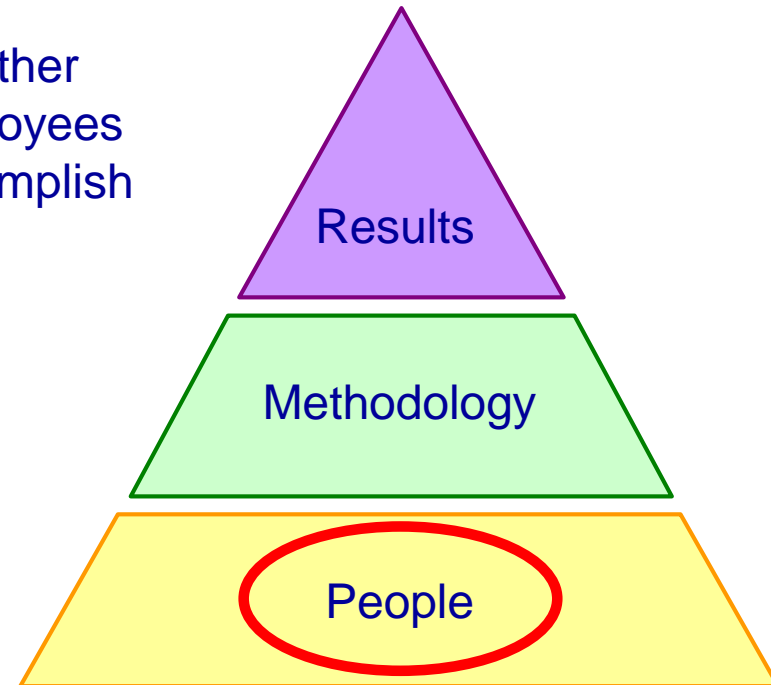


WCM is based on TEAM WORK

- ▶ People working together in teams following a common methodology to deliver results
- ▶ Sharing our experiences & a way of working across departments makes everything easier!

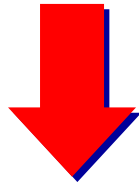


Together
Employees
Accomplish
More



World Class Manufacturing

1. Data collection
2. Deployment / where are the losses ... /
3. Methodologies and tools / 5S, 4M, 5 Why, ECRS, /
4. Teams



- Increase efficiency / productivity
- Reduction of waste
- Reduction of complaints and claims
- Increase Safety
- Motivation

... WCM is...

... the most complete...

as the practical realisation of the "Learning Organization"
through the application of four basic concepts:

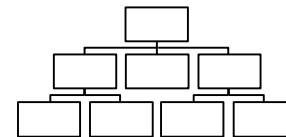
➤ Committees organisation



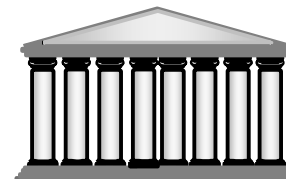
➤ Teamwork



➤ Approach depth



➤ Managing by Deployment



What WCM is about

Involving all the available resources



Involve people in a organized way

Team Work

WCM is based on TEAM WORK. Nothing can be achieved if one works alone. But if we share our experience across departments, everything is EASIER!

Together
Employees
Accomplish
More



Why Team work?

More EFFECTIVE Problem solving

- Better decisions
- Better Results

Through Teamwork we CREATE:

- A sense of belonging
- "Grow capability and skills" of WCM System.
- A STRONG FOUNDATION.

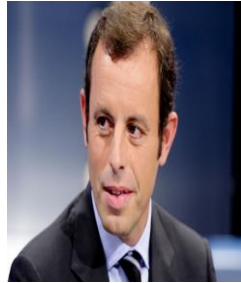


How do we organize in Factories?

The three levels in sport and WCM

Football

The owners



The coaches



The players and the team



In the Factory

The steering committee



The pillar coaches

Pillar Coach for Improvement Team A



Pillar Coach for Improvement Team B

The players and the team



WCM must be a real change process

Capable to maintain itself ...



If any of the steps are missing, we will not have sustainable change

World Class Manufacturing

Just common sense?

- World Class Manufacturing opens minds and doors to new possibilities

**You don't
know what
you don't
know**



WCM is a one-way journey

It's not always easy. Sometimes it's even painful...but:

It works!

It makes the difference!

It changed the way we do business!

Moving toward World Class

**WCM – World Class
Manufacturing**

**“World Class Organizations
need World Class People”**

Thank you

