

Fabbrica e Futuro



Carlo Carteri

Bologna, 19 Marzo 2014

Barilla
The Italian Food Company. Since 1877.

Agenda

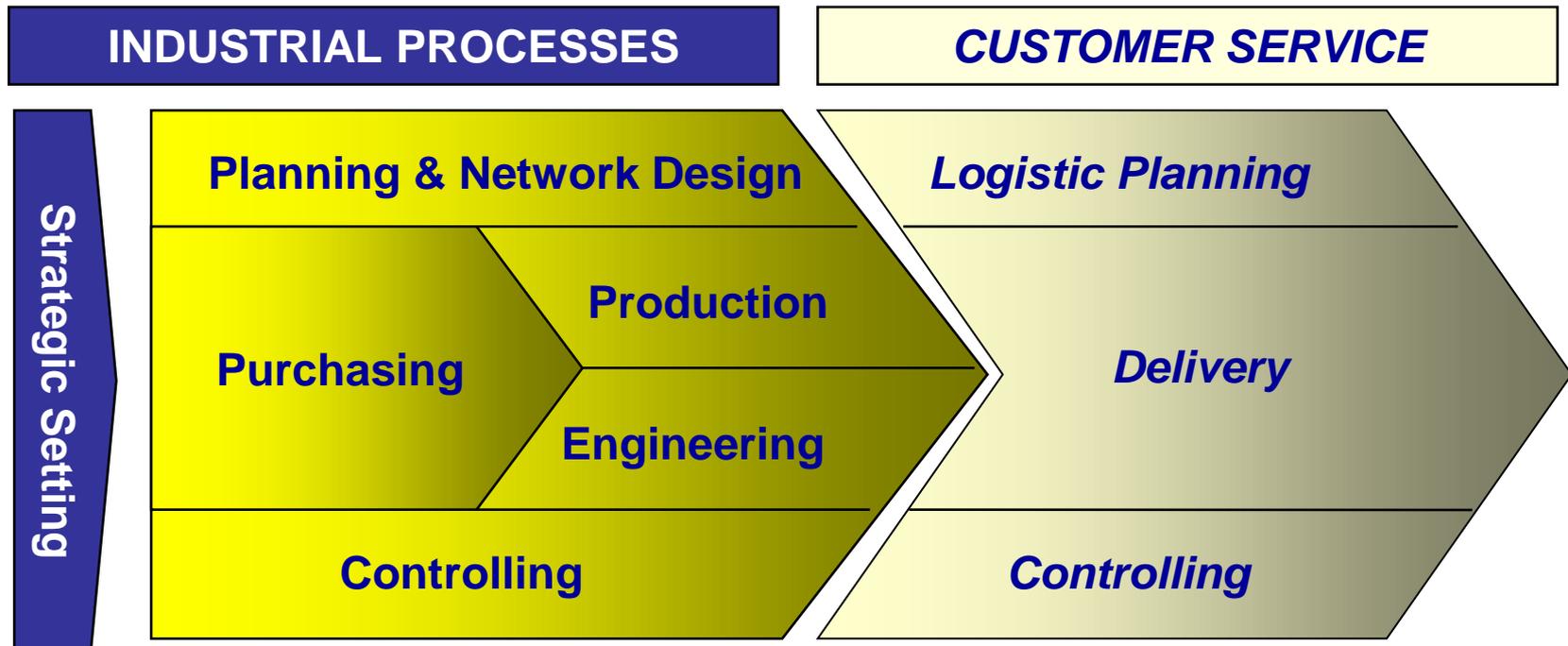
- Barilla Company 
- Supply Chain - Organizzazione

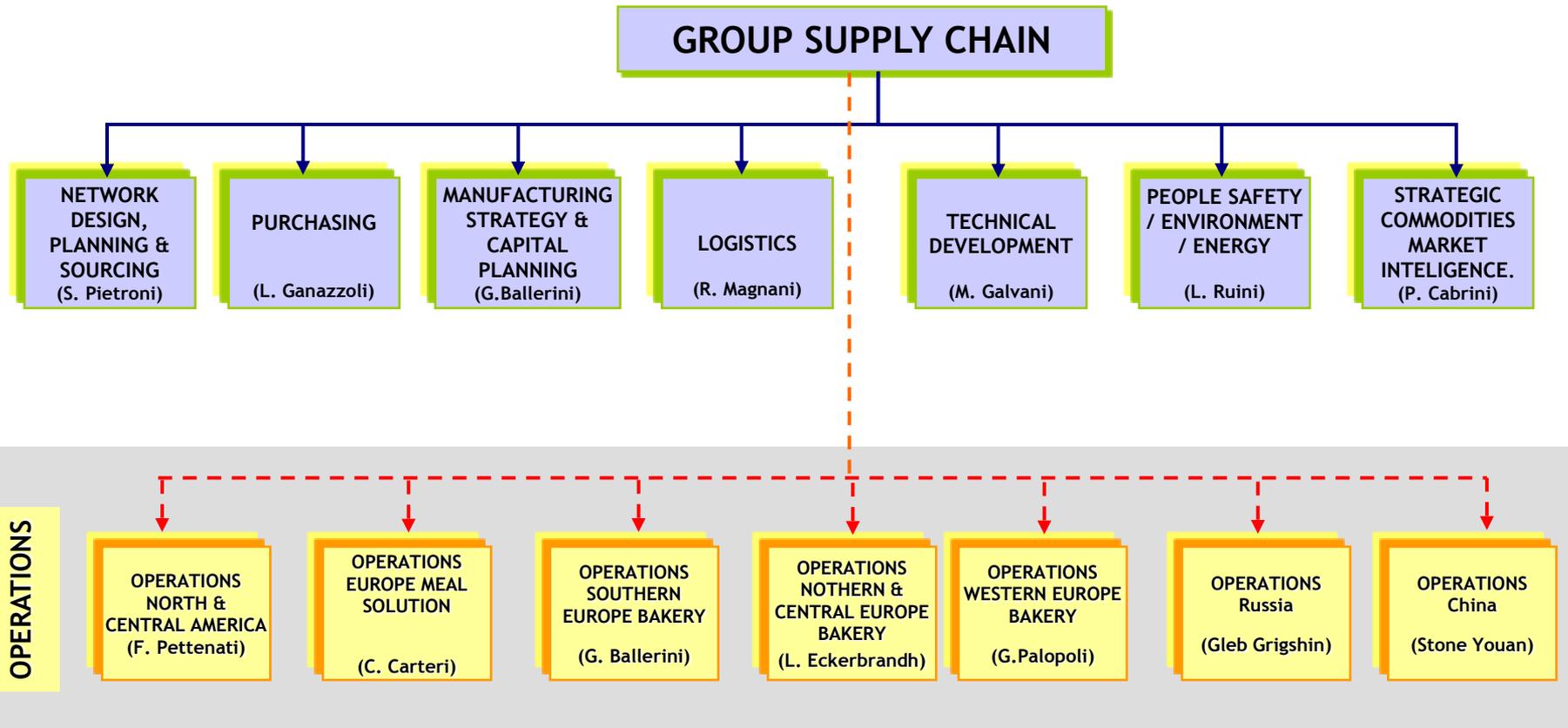


- Background
- Obiettivo
- Pre-work
- Model Design
- Modelli e Risultati

*Fornire i **prodotti richiesti** dal mercato garantendo la **qualità**, il **livello di servizio ai clienti** ai **minori costi** possibili attraverso:*

- Un organizzazione per processi attraverso le Business Units e i mercati*
- Forte integrazione con il Customer Service*





LOGISTICS	PURCHASING	PLANNING	HSE&E (Health, Safety, Environment and Energy)
<ul style="list-style-type: none"> • Purchasing strategy\definitio n <ul style="list-style-type: none"> • Markets analysis • Sourcing strategy • Risk management 	<ul style="list-style-type: none"> • Purchasing strategy\definitio n <ul style="list-style-type: none"> • Markets analysis • Sourcing strategy • Risk management 	<ul style="list-style-type: none"> • Competitive intelligence/ Benchmarks/Operating Model setup <ul style="list-style-type: none"> • Competitors repository and analysis methodology • Operative model set-up for new platforms/businesses 	<ul style="list-style-type: none"> • Definition of policies and guidelines for HSE&E.
<ul style="list-style-type: none"> • Logistic sourcing • Suppliers scouting • Tenders/negotiation • Contract definition /formalization 	<ul style="list-style-type: none"> • Supplier selection <ul style="list-style-type: none"> • Supplier scouting • Supplier base definition • Supplier approval (e.g. food safety) 	<ul style="list-style-type: none"> • Sourcing strategy definition <ul style="list-style-type: none"> • Where to produce • How to deliver • Sourcing capacity management <ul style="list-style-type: none"> • Apply the Markets Demand priorities when capacity is constrained 	<ul style="list-style-type: none"> • Define organization, processes, systems kpi's for GSC sustainability
<ul style="list-style-type: none"> • Contracts & 3PL management <ul style="list-style-type: none"> • Periodic performance / tariff review 	<ul style="list-style-type: none"> • Make or buy decision <ul style="list-style-type: none"> • Make or buy assessment • Sourcing integration level 	<ul style="list-style-type: none"> • Long term capacity planning • Medium and short term planning execution <ul style="list-style-type: none"> • All categories all countries 	<ul style="list-style-type: none"> • Long and short term activities planning for GSC sustainability <ul style="list-style-type: none"> • Projects planning
<ul style="list-style-type: none"> • Logistics projects management <ul style="list-style-type: none"> • Technological set-up • Systems set-up • People organization 	<ul style="list-style-type: none"> • Core categories & global suppliers buying process execution <ul style="list-style-type: none"> • Contract management 	<ul style="list-style-type: none"> • Order to deliver process set-up • Service level agreement design with customers <ul style="list-style-type: none"> • all relevant design items for <i>cost of service</i> 	<ul style="list-style-type: none"> • Global strategic GSC sustainability projects management <ul style="list-style-type: none"> • Projects execution
	<ul style="list-style-type: none"> • Supplier evaluation and management 	<ul style="list-style-type: none"> • Complexity management <ul style="list-style-type: none"> • Abc curve distribution (volumes margins net sales) 	<ul style="list-style-type: none"> • HSE&E Auditing guidelines definition • Global HSE&E Auditing Program & Execution
		<ul style="list-style-type: none"> • Working capital optimization (stock level vs. service level) 	

KPI'S management : long and short term target setting, control

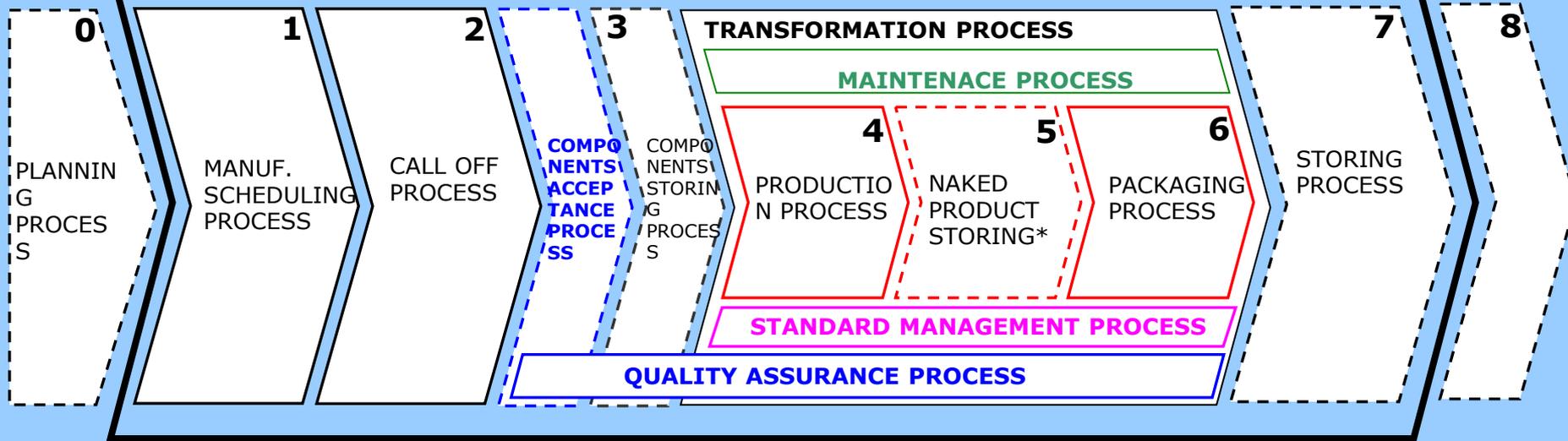
Competences development, people planning and careers development

Systems design, set-up and management

ENGINEERING	MANUFACTURING STRATEGY AND CAPITAL PLANNING	OPERATIONS
<ul style="list-style-type: none"> • Definition policies, general rules, for equipments and lines design with reference to: <ul style="list-style-type: none"> • Long term efficiency • Food safety requirements • Environmental impact • Openness to further development opportunities 	<ul style="list-style-type: none"> • Global capex planning, management and control <ul style="list-style-type: none"> • Target set-up • RCA standard • Power delegation 	<ul style="list-style-type: none"> • Capital planning definition and RCA authorization process management <ul style="list-style-type: none"> • For any single plants • For any single project • Design, develop and install all the non-central projects (80% of total)
<ul style="list-style-type: none"> • Definition of the requirements and specs for equipments <ul style="list-style-type: none"> • standardization • supplier base rationalization • state of the art solutions 	<ul style="list-style-type: none"> • Manufacturing system development <ul style="list-style-type: none"> • PRO-MO • SAP production costing 	<ul style="list-style-type: none"> • Execution of the pant organization models <ul style="list-style-type: none"> • People requirements and fulfillment actions definition (short and long term)
<ul style="list-style-type: none"> • Design, develop and install all the relevant processes equipment (>200k€), definition of guidelines and validation for the other 	<ul style="list-style-type: none"> • Operational excellence guide <ul style="list-style-type: none"> • Made in Barilla • Best practices 	<ul style="list-style-type: none"> • Continuous improvement projects execution <ul style="list-style-type: none"> • Cost saving, Quality, Service level, safety and environment
<ul style="list-style-type: none"> • Design and validation of standard packaging guidelines for technical and graphical packaging 	<ul style="list-style-type: none"> • Plant Organizational development <ul style="list-style-type: none"> • Design and set-up 	<ul style="list-style-type: none"> • External stockholders relationship management <ul style="list-style-type: none"> • Community org., Fire brigade, Food safety org., etc.
<ul style="list-style-type: none"> • Monitor technical and technological innovation for new technology and packaging product 	<ul style="list-style-type: none"> • Maintenance policies definition <ul style="list-style-type: none"> • Maintenance for availability • Maintenance activities planning • Performances monitoring 	<ul style="list-style-type: none"> • Define all new products/process feasibility at plant level
<p align="center">KPI'S management : definizione target e controllo di lungo e breve termine</p>		
<p align="center">Competences development, people planning and careers development</p>		
<p align="center">Systems design, set-up and management</p>		

PLANT MANUFACTURING PROCESS FLOW

PLANT MANUFACTURING PROCESS



HC MODEL

HEALTH SAFETY & ENVIRONMENT MODEL

CONTROLLING MODEL

ASSET LIFECYCLE MANAGEMENT MODEL

QUALITY AND FOOD SAFETY MODEL



Siti Produttivi	30
Linee produttive	170
Produzione (interna)	1.560 kton
Persone	6.600

- Barilla opera in *30 siti produttivi*, in *9 paesi diversi*, provenienti da diversi background
- Ogni stabilimento ha *differenti competenze* e capacità produttive
- Lo scambio di *conoscenze* e la *crescita* reciproca *non è fortemente sviluppata*
- Barilla aveva un potenziale di *differenti culture*, ed *esperienze diversificate*

Massimizzare la
“manufacturing performance”
(efficienza, efficacia e sviluppo del business)

- Utilizzo di **un sistema comune di “best practices”**
- Coinvolgimento di tutte le **Person**e degli stabilimenti
- La diffusione della **Cultura e dei Valori** dell’impresa

In tutti gli stabilimenti del gruppo.

- **Benchmarking :**
 - **Fiat Auto WCM** (Melfi)
 - **Maserati Auto WCM** (Modena)
 - **Sew Eurodrive** (Varese)
 - **Tetrapack WCM** (Rubiera)

- **Proposte di consulenza:**
 - **AT Kerney**
 - Benchmarking with Nestlé Water (Paris)
 - Benchmarking with Case New Holland WCM (Rome)
 - **Mc Kinsey**
 - Benchmarking with Diageo Spirits (Asti)
 - **Gea**
 - Benchmarking with Ecco Shoes (Slovacchia)

- **Altri approfondimenti**
 - **Galgano**
 - **Accenture**
 - **Prouductility srl**

Le aziende a confronto

- Tutte le aziende ritengono opportuno investire risorse nelle proprie organizzazioni per ottenere sinergie, integrazione e opportunità di miglioramento.
- Punto chiave di successo: Company commitment
- E' ritenuto di grande valore costruire e sviluppare un network integrato nelle operations, con un linguaggio comune, stessi metodi di base e strumenti.

In Barilla

- Parte delle “best practices”, dei metodi e strumenti erano già presenti in azienda in alcune fabbriche (disomogeneità)

Creare internamente il modello è stata la scelta



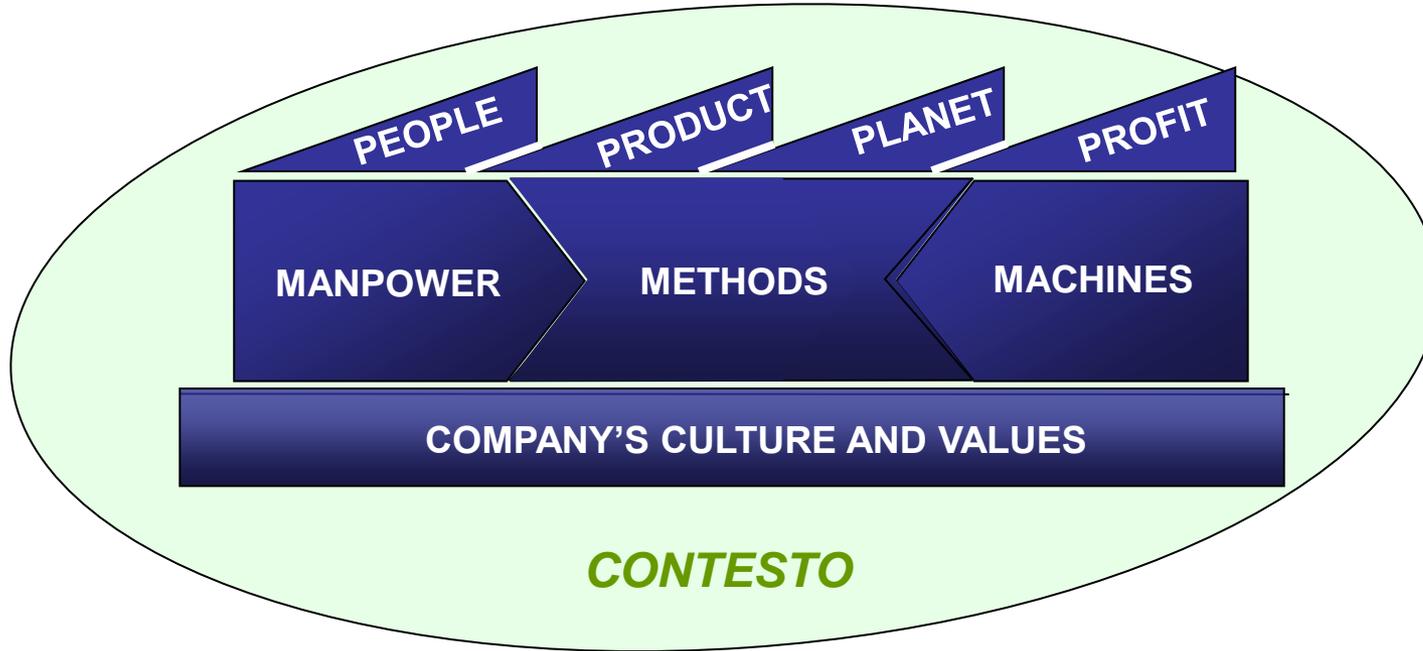
- Sfruttare il potenziale, le esperienze, i diversi modelli operativi e le culture esistenti
- Disegnare un modello comune dei processi di manufacturing , basato sulle migliori pratiche “interne”, da diffondere in tutte le nostre operations
- Arricchire le conoscenze con esperienze provenienti da *altre realtà*

- Applicabile ovunque (tutti i siti produttivi)
- Un modello dinamico e 'aperto',
(che possa essere continuamente sviluppato in base alle emergenti esigenze e con il contributo di tutti)

MIB COUNCIL

- CEO
- SUPPLY CHAIN and HC DIRECTOR
- MANUFACTURING STRATEGY DIRECTOR
- OPERATIONS DIRECTORS





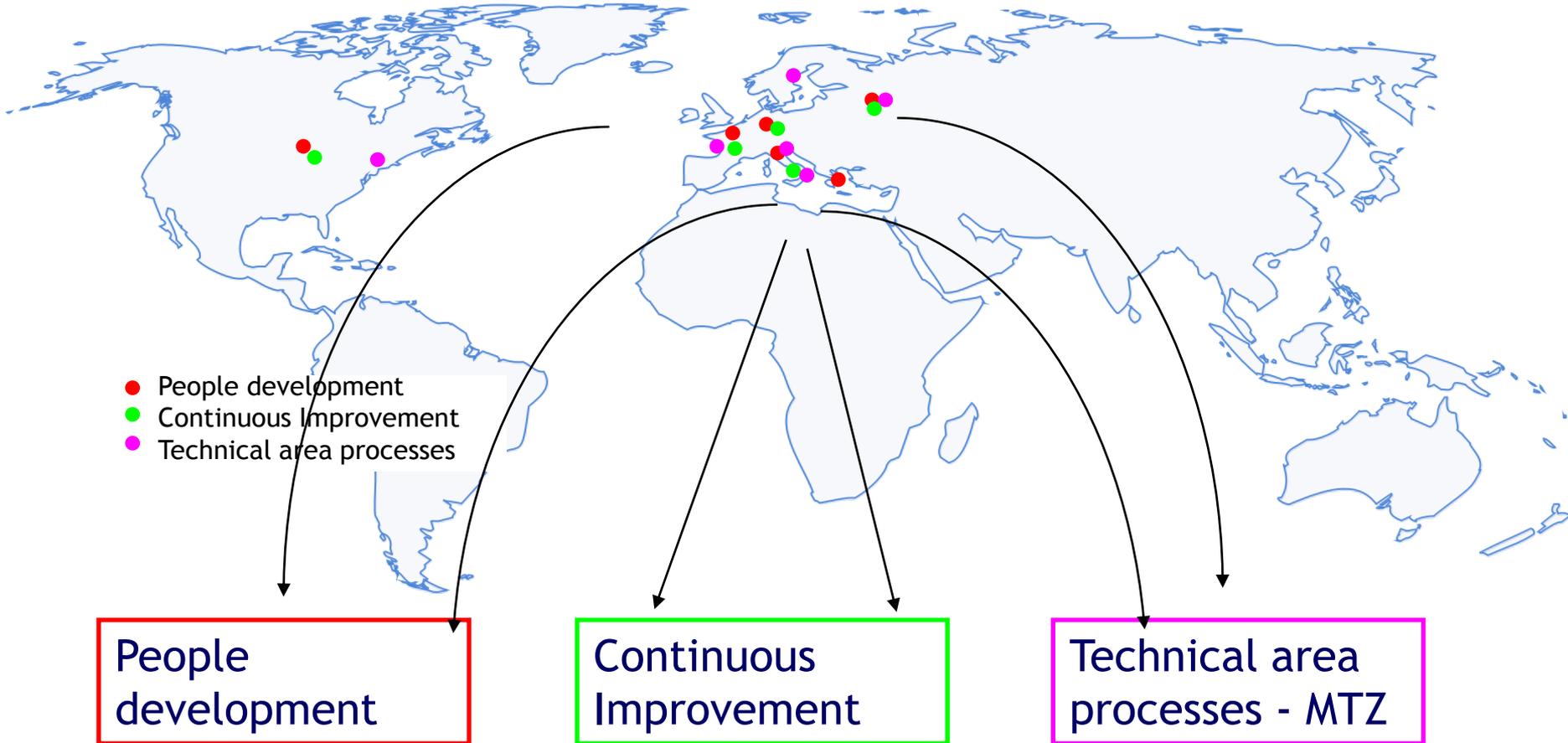
PROCESSI DI MANUFACTURING

CULTURE AND VALUES	METHODS	MANPOWER	MACHINE
1 - MISSION, CULTURE AND VALUES	2 - STRATEGY AND GOAL SETTING	12 - PEOPLE MNGT AND DEV.	14 - ASSET LIFECYCLE MNGT
	3 - COMPANY AND PLANT ORGANIZ.	13 - COMMUNICATION	15 - IT SYSTEMS
	4 - PLANT MANUFACT. PROCESSES		
	5 - MANUFACT. STDS AND PROCEDURES		
	6 - TECHNICAL AREA PROCESSES		
	7 - CONTINUOUS IMPROVEMENT		
	8 - HEALTH, SAFETY, ENVIRONM., ENERGY		
	9 - QUALITY AND FOOD SAFETY		
	10 - PURCHASING		
	11 - PLANNING AND SCHEDULING		

BARILLA	TOTAL		
	Actual YTD	Δ% vs BDG	Δ% vs LY
PEOPLE			
Headcount [#]	6.618	+0,5%	
Accident Frequency Index	24,2	-10,5%	
Accident Severity Index	0,63	-22,2%	
Total Absenteeism (%) (1)	6,1%	+13,0%	
Training (%) (2)	1,6%	-5,1%	
PRODUCT			
Consumer Complaints (PPM)	2,12	+5,7%	
DMQT Green Measures (%) (3)	82,5%	-4,9%	
PLANET			
Energy (TEP/kt)	123,8	-4,3%	
Garbage (t/[fp]kt)	15,7	-16,2%	
Recycled Garbage (%)	77,9%	+11,4%	
Water (m ³ /t)	1,99	-15,2%	
PROFIT effectiveness			
Production Volumes (t)	1.428.993	+0,2%	
MAPE vs Planning (%) (3)	20,1%	-7,1%	
Capacity Availability (%)	82,9%	+1,6%	
Capacity Utilization (%)	69,0%	-3,8%	
PROFIT efficiency			
Theoretical Yield (%)	85,2%	-0,5%	
Raw Materials Loss (%)	5,8%	+2,4%	
Labor usage (h/t)	4,63	-3,9%	
TOTAL EFFICIENCY (k€) B/(W)	14.547	+1,1%	
COGP (EUR/t)	947	-7,4%	
PROFIT Capex			
Approved (k€)	68.081	-28,3%	
Expenditure (k€)	65.851	-30,9%	
Cash-out (k€)	68.658	-19,5%	
PROFIT Working Capital			
Raw material Stock (days)	8,9	+2,3%	
Packaging Stock (days)	29,3	-1,7%	
Spare Parts Stock (days)	1.112	+0,0%	
PLANT INVENTORIES (K€)	77.194	+0,3%	

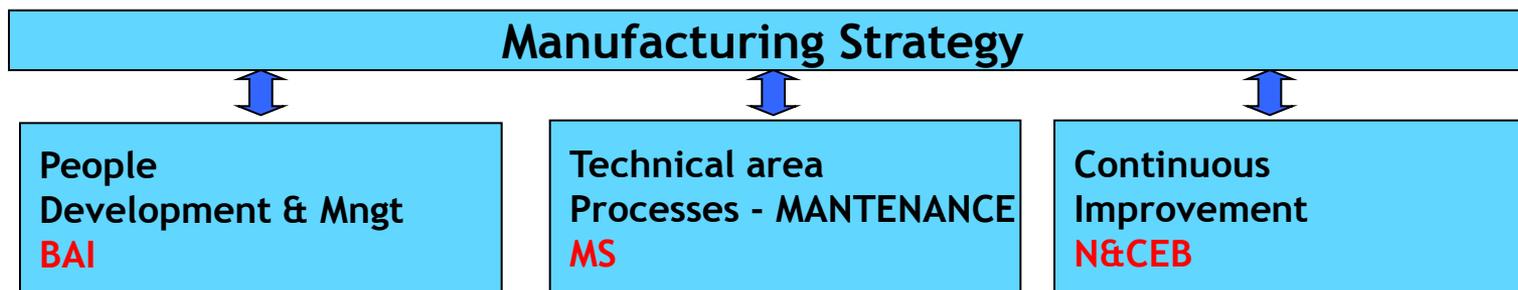
CULTURA E VALORI	1 - MISSION, CULTURE AND VALUES
METODI	2 - STRATEGY AND GOAL SETTING
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	9 - QUALITY AND FOOD SAFETY
	10 - PURCHASING
	11 - PLANNING AND SCHEDULING
	PERSONE
13 - COMMUNICATION	
MACCHINE	14 - ASSET LIFECYCLE MANAGEMENT
	15 - IT SYSTEMS





3 TEAM

16 PERSONE - 13 STABILIMENTI - 7 DIVERSE LINGUE E CULTURE



Area Operations	People Development	Technical area Processes	Continuous Improvement
MS	George Alexiou (Thiva Greece)	Sabino Piumelli (Foggia) Roberto Della Valle (Parma)	Alberto Dorigo (Caserta Italy)
BAI	Mike Biegger (Ames USA)	Carmine Simone (Avon USA)	Tanja Doyle (Ames USA)
SEB	Andrea Losi (Castiglione Italy)	Sommonte & Bigliardi (Castiglione & Rubbiano, It)	Paolo Forlano (Melfi Italy)
N&CEB	Vera Guendel (Celle Germany)	Enrich Hugoson (Filipstad Sweden)	David Langel (Celle Germany)
WEB	Saida Zairi (Valenciennes France)	Jean Marc Praud (Talmont France)	Jaques Laurent (Malterie France)
RUB	Victor Pak (Solne Russia)		



- People development
- Continuous Improvement
- Technical area processes

MIB steps



STEP 1

- Definizione obiettivi, contenuti, strategia
- Commitment del CEO
- Attività di benchmarking

STEP 2

- Creazione gruppi di lavoro
- Stesura modelli

STEP 3

- Condivisione modelli
- Approvazione

STEP 4

- Applicazione modello
- Implementazione linee guida
- Fine tuning modello
- training

STEP 5

- Roll out

I principali obiettivi:

1. Testare l'efficacia del Modello e l'applicabilità
2. Effettuare eventuale fine-tuning
3. Settare una strategia di implementazione (Roll out)

	LOCATION	AREA	PLANT REFERENCE	PLANT SUPPORT
MS	FOGGIA (Italy)	TAP	Sabino Piumelli	Nicola Colandrea
	CASERTA (Italy)	CI	Alberto Dorigo	Plant Manager
	THIVA (Greece)	PD	Alexiou George	Vasillis Radillis
BAI	AVON (Usa)	TAP	Carmine Simone	Rosario Raciti
	AMES (Usa)	CI	Tanya Doyle	Stu Bremer
		PD	Mike Biegger	Stacey Cale
SEB	CASTIGLIONE & RUBBIANO (Italy)	TAP	Massimo Sommonte Alessandro Bigliardi	Silvano Scaccaglia
	MELFI (Italy)	CI	Paolo Forlano	Mariateresa Pontrandolfi
	CASTIGLIONE	PD	Losi Andrea	Michela Caravati, Gennaro Esposito
N&CEB	FILIPSTAD (Sweden)	TAP	Henric Hugoson	Tommy Mohlin
	CELLE (Germany)	CI	David Langel	Stefan Schroth
		PD	Vera Gundel	Jens Northmann
WEB	TALMONT	TAP	Jean Marc Proud	Gilles Jeannes
	MALTERIE	CI	Jaques Laurent	Plant Manager
	VALENCIENNES	PD	Saida Zairi	Gilles Guerlet
RUB	SOLNE (Russia)	CI	Victor Pak	

15 PROGETTI PILOTA

30 PERSONE - 15 STABILIMENTI - 7 DIVERSE LINGUE E CULTURE

MIB steps



STEP 1

- Definizione obiettivi, contenuti, strategia
- Commitment del CEO
- Attività di benchmarking

STEP 2

- Creazione gruppi di lavoro
- Stesura modelli

STEP 3

- Condivisione modelli
- Approvazione

STEP 4

- Applicazione modello
- Implementazione linee guida
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- training

STEP 5

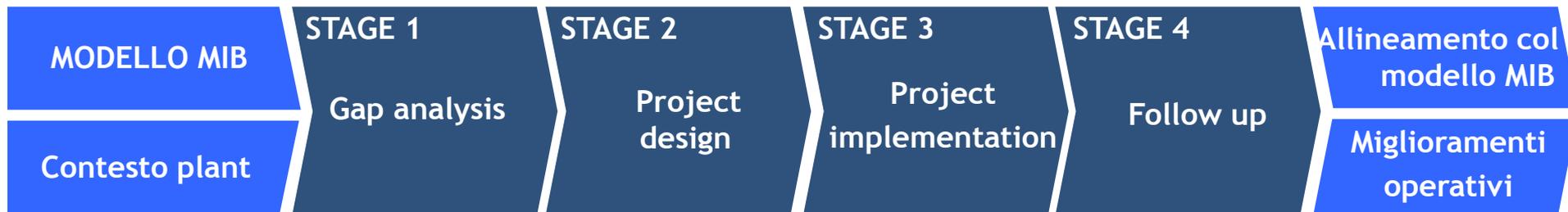
- Roll out

■ Completed

■ Ongoing

INPUT

OUTPUT



MIB TEAMS NETWORK & COMMUNICATION

ATTIVITA':

STAGE 1

- Analisi background
- Identificazione macro gap
- Idee di miglioramento

STAGE 2

- Definizione goals & KPI
- Definizione team
- Planning
- Analisi costi/benefici

STAGE 3

- Approvazione progetti
- Creazione budget
- Action plan di dettaglio

STAGE 4

- Follow up

AREE DI INTERVENTO

CULTURA E VALORI	1 - MISSION, CULTURE AND VALUES
METODI	2 - STRATEGY AND GOAL SETTING
	3 - PLANT ORGANIZATION
	4 - PLANT MANUFACTURING PROCESSES
	5 - MANUFACTURING STANDARDS AND PROCEDURES
	6 - TECHNICAL AREA PROCESSES - MAINTENANCE
	7 - CONTINUOUS IMPROVEMENT
	8 - HEALTH, SAFETY, ENVIRONMENT, ENERGY
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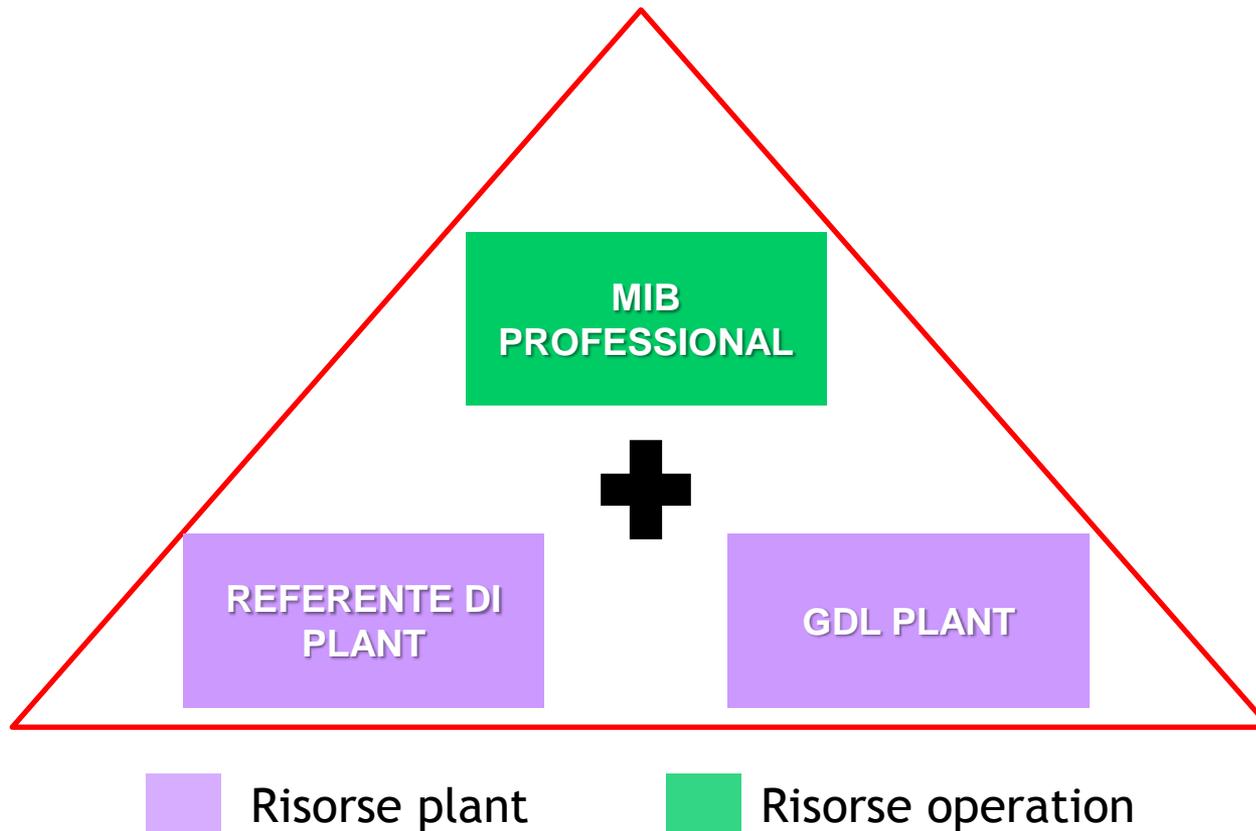
UNA NUOVA AREA

PER OGNI PLANT

OGNI ANNO

«NON FARE IL PASSO + LUNGO DELLA GAMBA»

- Sono state create delle figure **MIB professional**, a supporto dei progetti (una persona per ogni operation unit)
- Sono stati individuati dei **referenti di plant** per ogni stabilimento

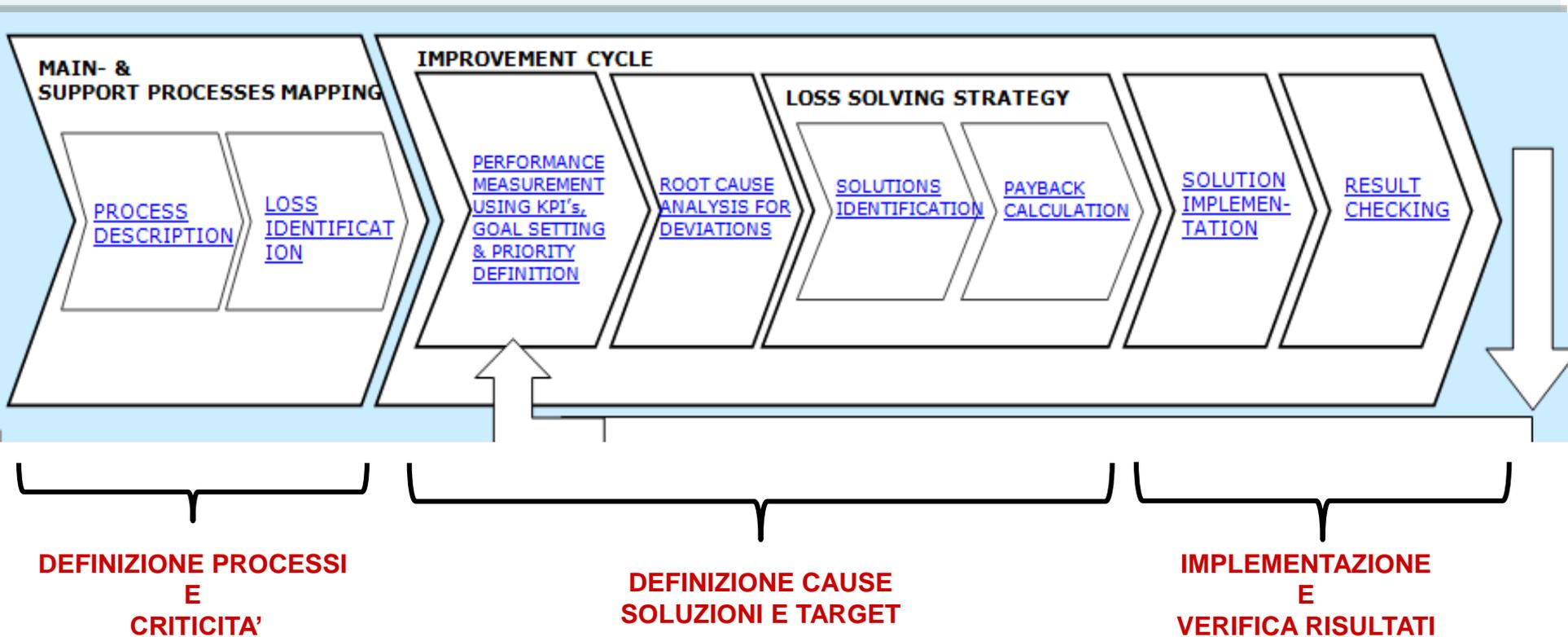


- CI-continuous improvement
- TAP-technical area process
- PD-people development

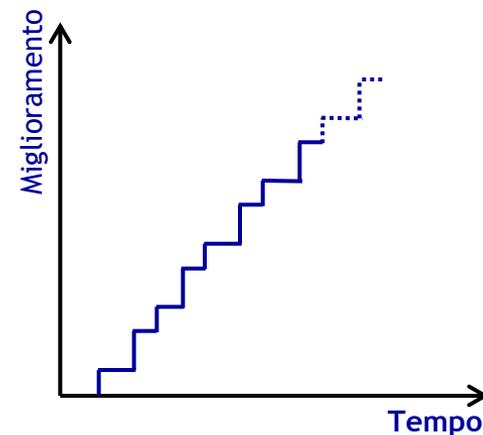
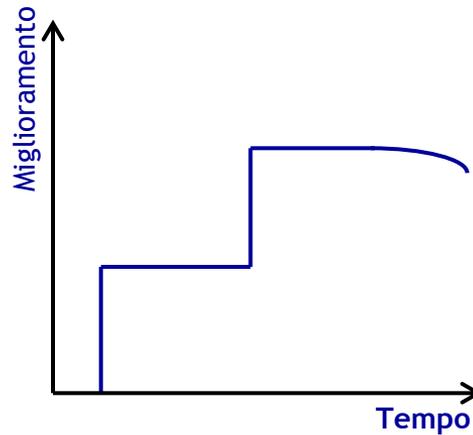


«Obiettivo»

OTTENERE UN MIGLIORAMENTO CONTINUO DEI KPI



	Miglioramenti strategici	MIB cicli
Planning	Lungo termine	Corto/medio (fino ad 1 anno)
Investimenti	grandi (CAPEX)	Zero o poco(OPEX)
Coinvolgimento operat	basso	alto
Steps	Grandi e irreversibili	Piccoli e reversibili

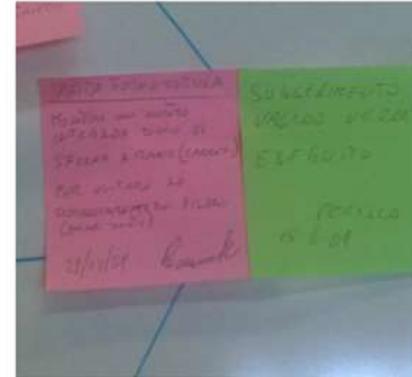
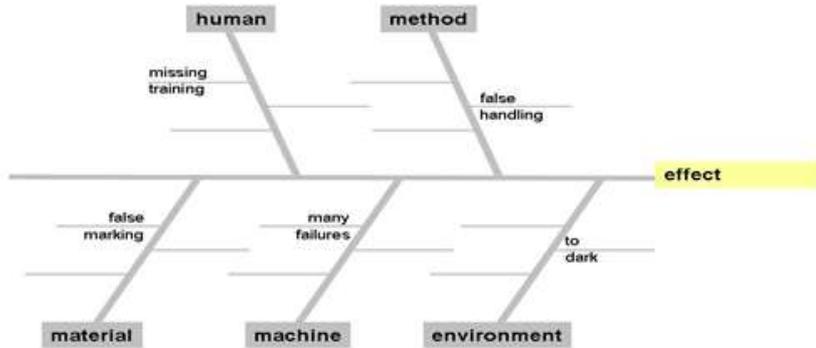


		KPI	Promo	Flow charts & spaghetti charts	Pareto & CC	5 W/5W1H	CI ideas	Fishbone diagram	Viisualization board	Brainstorming	VSM	SMED	CEDAC	A3	KAIZEN WEEK	5S	Lean 6 sigma
PROCESS MAPPING	Process description			✓							✓						✓
	Loss/Opportunity Identification	✓	✓		✓		✓				✓						✓
IMPROVEMENT CYCLE	Performance Measurement	✓	✓					✓		✓	✓	✓	✓	✓	✓		✓
	Root cause analysis					✓		✓		✓	✓	✓	✓	✓	✓		✓
	Loss solving Strategy									✓	✓	✓	✓	✓	✓	✓	✓
	Solutions Implementation								✓		✓	✓	✓	✓	✓	✓	✓
	Results Check	✓	✓						✓		✓	✓	✓	✓	✓		✓

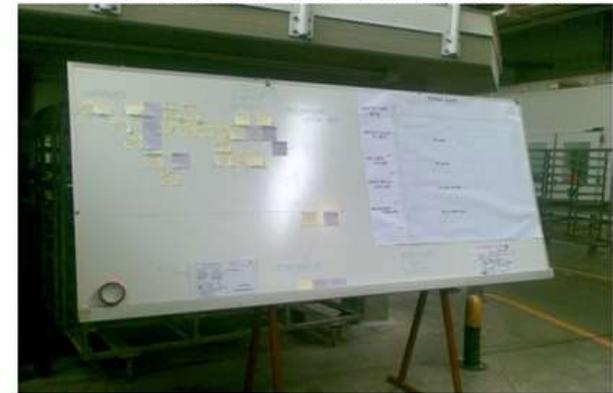
«BASIC TOOLS»

«COMPLETE METHOD»

Fish diagram



CEDAC DIAGRAMS:EXAMPLES





7 MUDA

- 1) **QUALITY** (WASTE, REGRIND, COMPLAINTS, ...)
- 2) **WAITING** (FULL SILOS, RAW MATERIALS TO PRODUCE, PACK LINE, MAINTAINERS, OPERATORS FOR CHANGE OF THE FORMAT OR TRANSITORY)
- 3) **OVERPRODUCTION** (OVERWEIGHT, HUMIDITY)
- 4) **MOVEMENT-PEOPLE** (OPERATOR, MAINTAINER, MOVEMENT IN WAREHOUSE, ...)
- 5) **TRANSPORT-MATERIAL** (RAW MATERIAL IN PRODUCTION OR PACK AREA)
- 6) **INVENTORY** (STOCK IN WAREHOUSE, IN PACK AREA, BLOCKED PRODUCTS)
- 7) **OVERPROCESSING** (QUALIFICATION OF OPERATORS, TOOLS AND MACHINE USED)

COME DEFINIRE LE PERDITE???

7 MODI

1) QUALITY (WASTE REGRIND CONSUMPTION)

2) WAITING (FILL SLOTS AND OVERSEEN CHANGE OF THE MACHINERY)

3) OVERPRODUCTION (OVERPRODUCTION)

4) MOVEMENT-REGRIND (SHORT-CUTS)

5) TRANSPORT-REGRIND (SHORT-CUTS)

6) OVERPRODUCTION (OVERPRODUCTION)

7) OVERPRODUCTION (OVERPRODUCTION)

Barilla Laboratory

PRODUCTION-REGRIND

Made in Barilla

	2011-REGRIND Cons (ton)	2011-REGRIND Cons %	2011-REGRIND ass %	2011-SPINDED	2012-BUDGET
101 - Kisa Kesme [short cut]	178,7	0,92	0,93	€	6,93
102 - Kisa Kesme [short cut]	252,2	0,87	0,69	€ 11.254	6,93
103 - Fiyonk [short cut/dought]	67,7	0,51	0,76	€	6,93
105 - Kisa Kesme [short cut]	38,5	1,19	2,40	€	6,97
106 - Kisa Kesme [short cut]	81,7	1,29	1,20	€	1,52
107 - Uzun Kesme [long cut]	151,7	1,14	1,22	€	1,08
le complessivo	770,5	0,91	0,94	€ 48.544	6,93

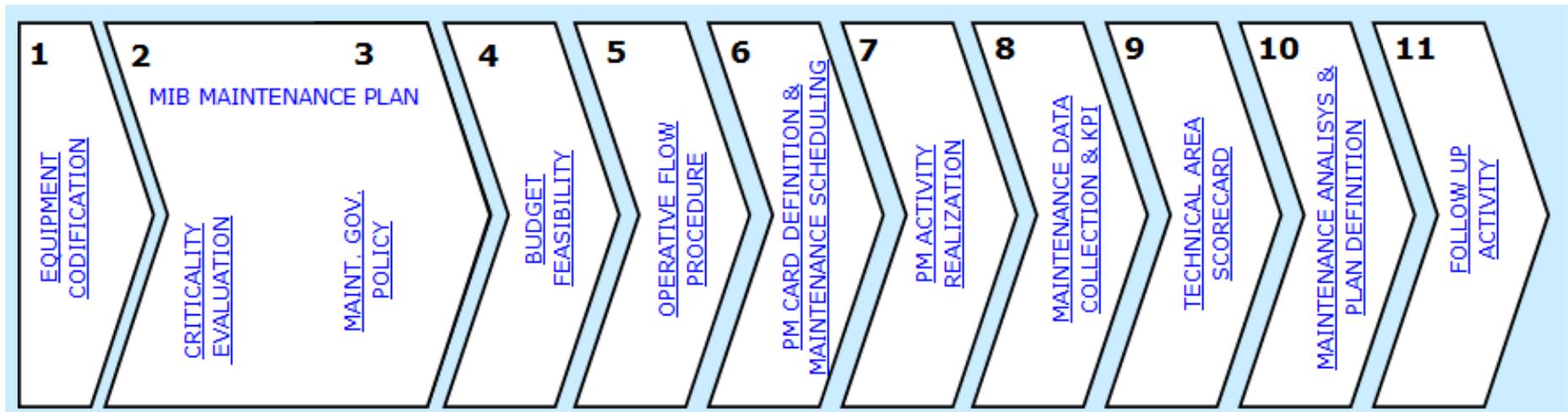


- CI-continuous improvement
- TAP-technical area process MTZ
- PD-people development



«Obiettivo»

1. OTTIMIZZARE I PROCESSI E I COSTI DI MANUTENZIONE
2. MIGLIORARE L'EFFICIENZA DEGLI IMPIANTI



DEFINIZIONE CRITICITA'
ASSET

DEFINIZIONE PROCEDURE
OPERATIVE

DATA COLLECTION &
SCORECARD

District

Plant

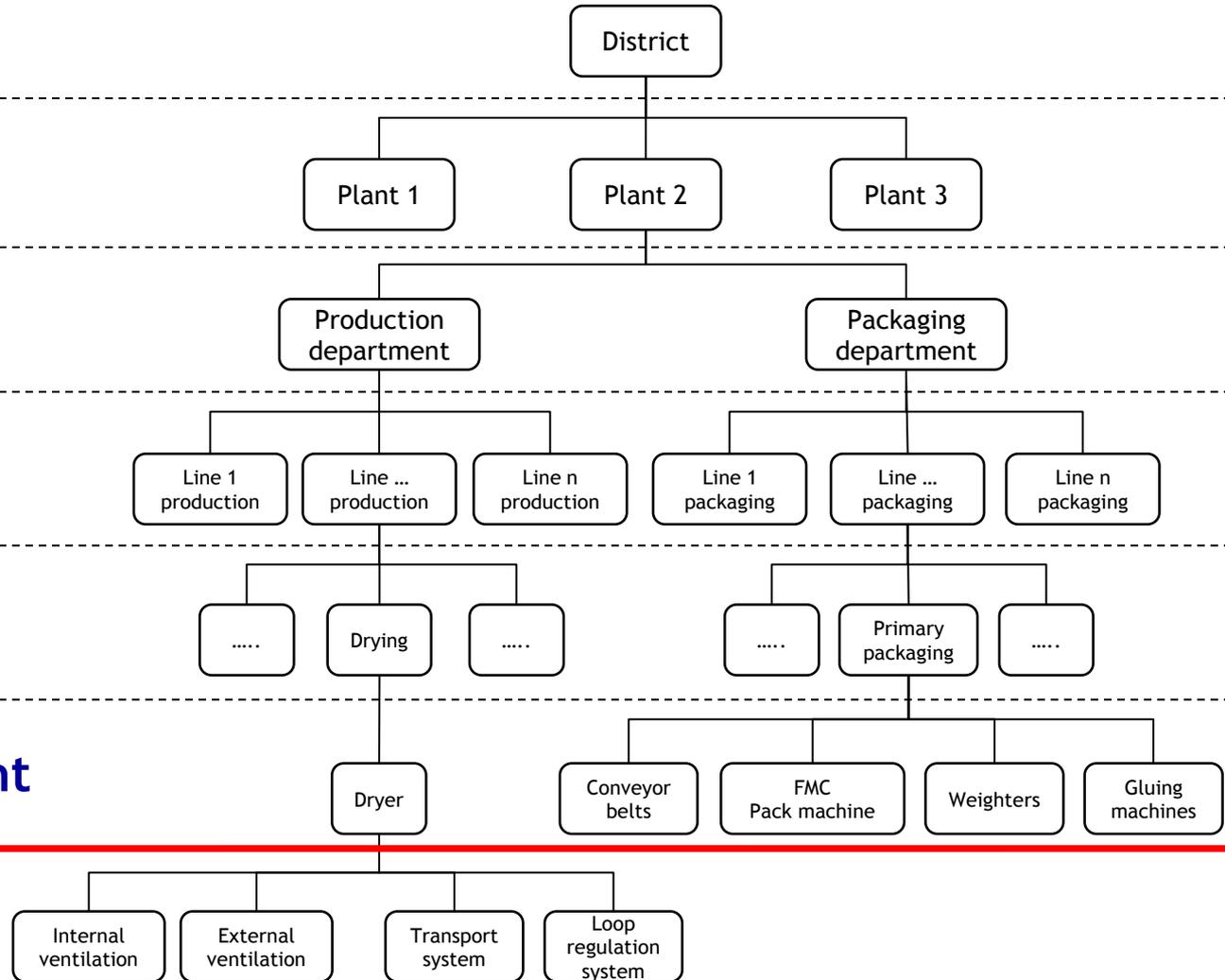
Department

Line

Group

Asset - Equipment

Sub-equipment



L'equipment è **critico se**, in caso di guasto, ci sono effetti negativi su **sicurezza, qualità e produttività**

E' CRITICO
VERAMENTE
!?!?



A GUASTO?
PREVENTIVA?
MIGLIORATIVA??

Il giusto equilibrio



SBAGLIATO!!

- **Sotto-dimensionare** frequenza della manutenzione preventiva
- Costi bassi ma...
- Poca disponibilità e affidabilità



SBAGLIATO!!

- **Sovradimensionare** frequenza della manutenzione preventiva/migliorativa
- Alta disponibilità e affidabilità ma...
- Costi troppo elevati

Per trovare il giusto equilibrio

Valutare la criticità degli equipment per stabilire la politica manutentiva

CATEGORIA	CRITICITA'	POLITICA MANUTENTIVA
A	Alta criticita'	Manutenzione preventiva. Dove possibile applicare la manutenzione predittiva.
B	Criticità intermedia	Manutenzione preventiva, ma in pochi casi alcune rotture sono accettate
C	Non critico	A guasto

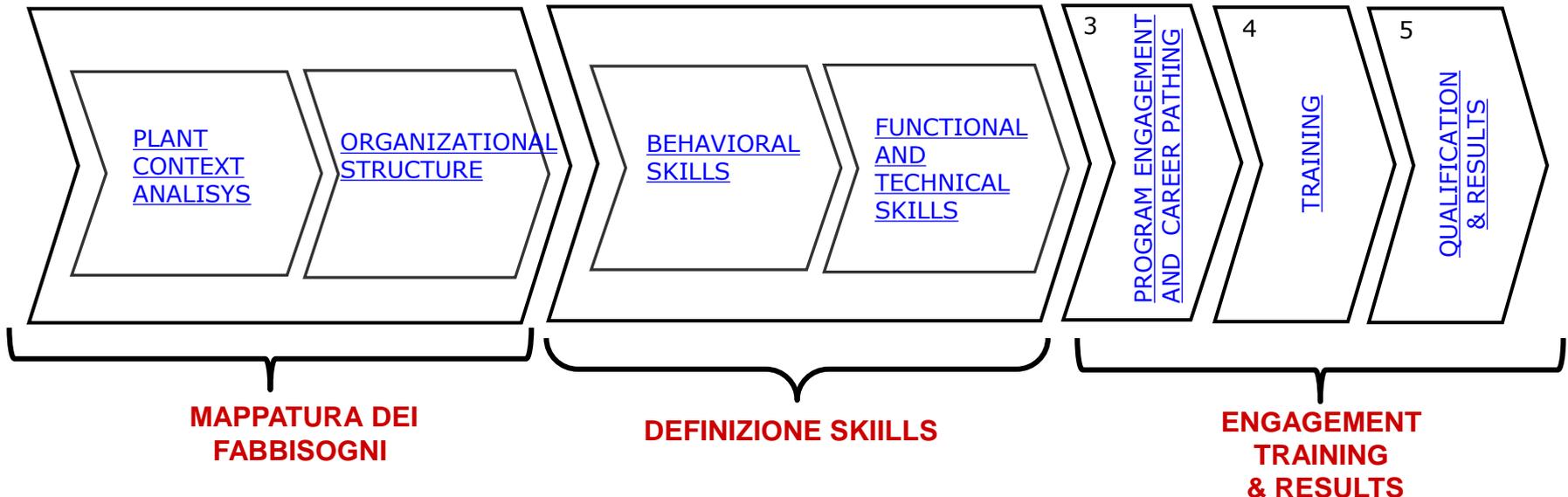
- CI-continuous improvement
- TAP-technical area process
- PD-people development



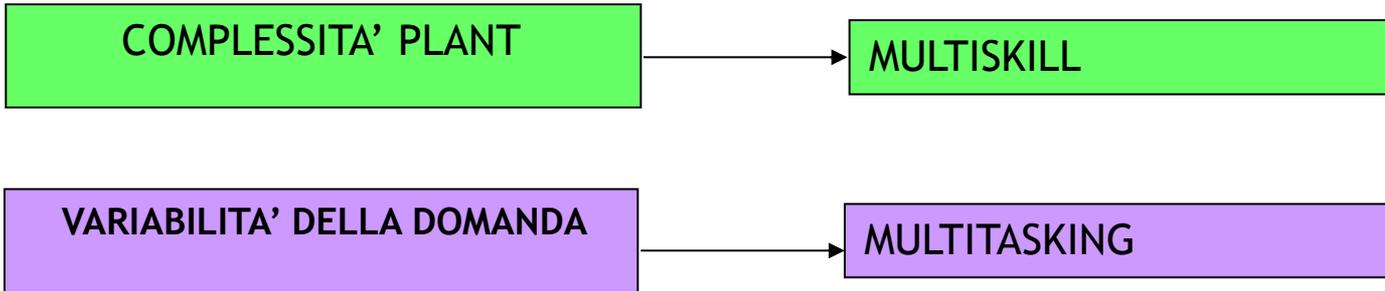
«Obiettivo»

Creare un percorso professionale che consenta la creazione di figure polivalenti e polifunzionali:

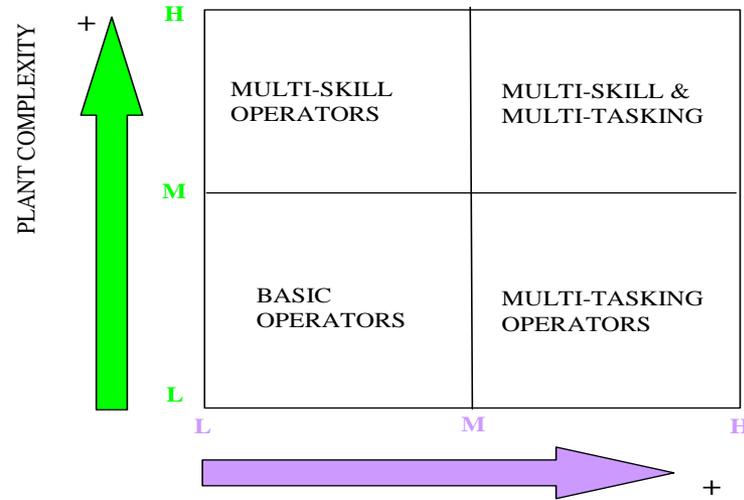
- **MULTISKILLS** (arricchimento conoscenza): Accrescere la conoscenza di una specifica mansione (qualità, sicurezza, manutenzione...)
- **MULTITASKING** (allargamento conoscenza): Accrescere la propria conoscenza su posizioni diverse (flessibilità)



LINEE GUIDA:



VALUTAZIONE:



DEPARTMENT A			DEPARTMENT B			DEPARTMENT C		
SUBROLE 1		SUBROLE N	SUBROLE 1		SUBROLE N	SUBROLE 1		SUBROLE N
N								
...						ST5	ST5	ST5
12								
11						ST4	ST4	ST4
10		ST5		ST5				
9	ST5		ST5		ST5	ST3	ST3	ST4
8		ST4	ST5		ST4			
7	ST4		ST4	ST3	ST4	ST2	ST2	ST2
6		ST3		ST3		ST3		
5	ST3		ST3	ST2		ST1	ST1	ST1
4		ST2		ST2	ST1	ST2		
3	ST2		ST2	ST1		ST1		
2								
1	ST1	ST1	ST1					

		2014		
	LOCATION	PD	TAP	CI
MSE	FOGGIA (Italy)			
	CASERTA (Italy)			
	THIVA (Greece)			
	PEDRIGNANO (Italy)			
	BOLU (Turkey)			
	RUBBIANO (Italy)			
BAI	AMES (USA)			
	AVON (Usa)			
SEB	RUBBIANO (Italy)			
	MELFI (Italy)			
	CASTIGLIONE (Italy)			
	ASCOLI (Italy)			
	CREMONA (Italy)			
	NOVARA (Italy)			
N&CEB	FILIPSTAD (Sweden)			
	CELLE (Germany)			
WEB	TALMONT (France)			
	LYON (France)			
	MALTERIE (France)			
	VALENCIENNES (France)			
	GRAND PRE (France)			
	GAUCHY (France)			
RUB	SOLNE (Russia)			
TOT		19	21	22

SITI PRODUTTIVI COINVOLTI: 23/30

MIGLIORAMENTO DELLE PERFORMANCE - 2013:

- EFFICIENZA: Cost Saving = **6 M€**
- QUALITA': Difettosità prodotto = **+3,6%**
- AMBIENTE: Consumo H2O = **-7,3%**
- Co2 Emission = **-6,1%**
- SICUREZZA: Indice di gravità = **-13,2%**

- Sviluppo di un *linguaggio comune*
- Favorito il *benchmarking* interno ed esterno
- Possibilità di *trasmettere le competenze* dei processi di base
- Approccio utile per *introdurre nuove risorse* nel mondo del manufacturing
- Stimolo per lo sviluppo della *cultura del miglioramento continuo*
- Rafforzamento e diffusione dei *valori dell'Impresa*

Nota: Premio Nazionale per l'Innovazione (*"Premio dei Premi"*),

«Istituito dal Governo italiano per valorizzare le migliori capacità innovative e creative di aziende, università, amministrazioni pubbliche, enti o singoli ideatori, al fine di favorire la crescita della cultura dell'innovazione nel Paese»

***"It is not the strongest of the species that survives,
not the most intelligent,
but the one most responsive to change."***

Charles Darwin
"The Origin of the Species"

