

DIAGNOSTICS IS POWER

The power to fight infectious diseases



Demand Driven World
1 2 3 4 5 2018

Become a Demand Driven Adaptive Enterprise

Frankfurt, Germany
October
11-12



BIOMERIEUX

THE TRUE STORY OF A DEMAND DRIVEN JOURNEY

+ 50 YEARS
OF EXPERTISE IN
IN VITRO DIAGNOSTICS

**2 LEADERSHIP POSITIONS
IN MICROBIOLOGY
GENERATE 2/3 OF SALES**

+ 20 YEARS
OF EXPERTISE IN INDUSTRIAL
MICROBIOLOGY CONTROL

€ Sales amounting to
€2.288 billion in 2017



1,600 people
dedicated to R&D



A large installed base of
92,800 systems



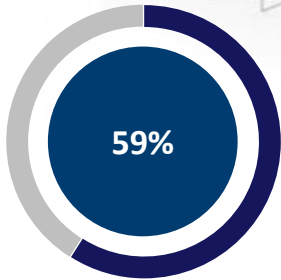
90%
of international sales



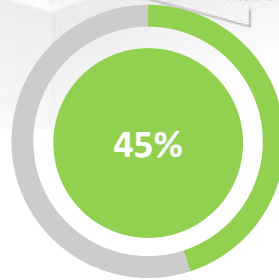
More than
10,000
employees worldwide

BIOMERIEUX EQUIPMENT & SPARES

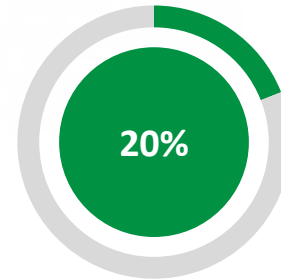
SUPPLY CHAIN AS A STAKE



of active references



of inventory (€)



of bioMérieux turnover

BIOMERIEUX E&S

SUPPLY CHAIN FOOTPRINT

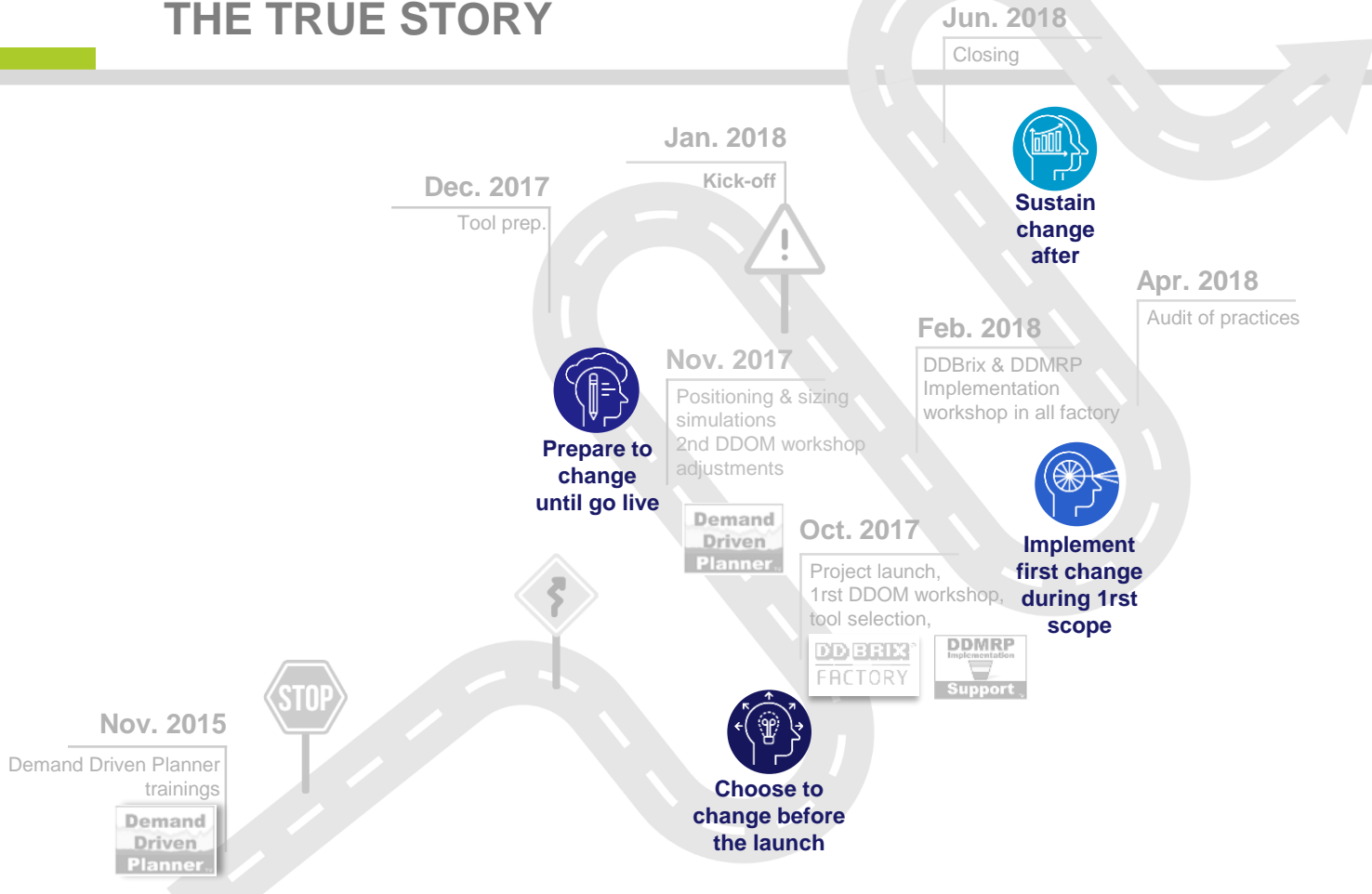


- 4 production sites
- 2 (soon 3) international DCs
- 42 subsidiaries
- 149 countries
- 450 FSEs



FOCUS ON CHANGE

THE TRUE STORY



CITWELL MANAGEMENT CONSULTING, OPERATIONAL & INNOVATIVE

Our key figures

40

People

to successfully conduct
your various projects

500+

Projects

achieved
since 2005

200

Clients

fully satisfied

50

Conferences

with clients testimonies

5

Offices

based in France
and overseas

14

Years

of expertise
in project transformation

Our DDAE expertise

Support the first
implementation and the roll-out

Raise awareness and train on
Demand Driven thoughtware,
before software



Accompany change, with the
IMCM approach

Define the pertinent
scope and build the pilot

20+ DDAE implementation projects



• APTIV •



LVMH
Fragrance Brands



WHY DEMAND DRIVEN FOR E&S ?

Equipments



51% Regions Forecast accuracy Equipment for 6 months (75 to 83% reagents)

Low & erratic volumes of Sales/Placement at local level

Spare parts



No forecast or with a very high error.

11% of IDC SKUs have an ADU > 1 unit / day
53% of SKUs have an ADU < 1 unit / week

Shortages are quite common

Inefficient collaboration

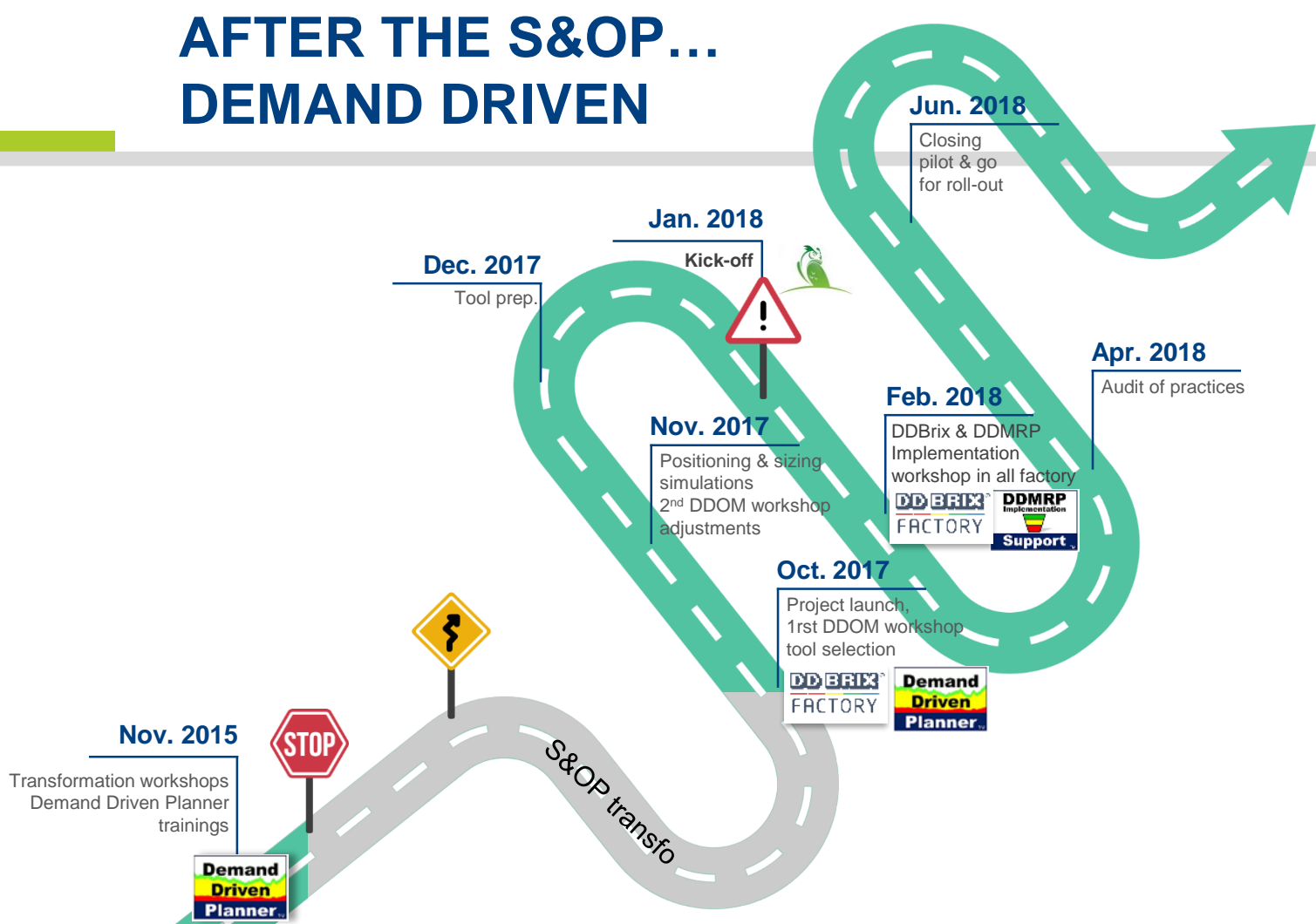


S&OP process managed by global Supply Chain

But plant KPIs mainly focused on costs -> 2 months firm horizon, 12 months **leveled budget**

Little to no agility

AFTER THE S&OP... DEMAND DRIVEN



Nov. 2015
Transformation workshops
Demand Driven Planner
trainings



S&OP transfo

Dec. 2017
Tool prep.

Jan. 2018
Kick-off



Nov. 2017
Positioning & sizing
simulations
2nd DDOM workshop
adjustments

Oct. 2017

Project launch,
1st DDOM workshop
tool selection



Feb. 2018

DDBrix & DDMRP
Implementation
workshop in all factory



Apr. 2018

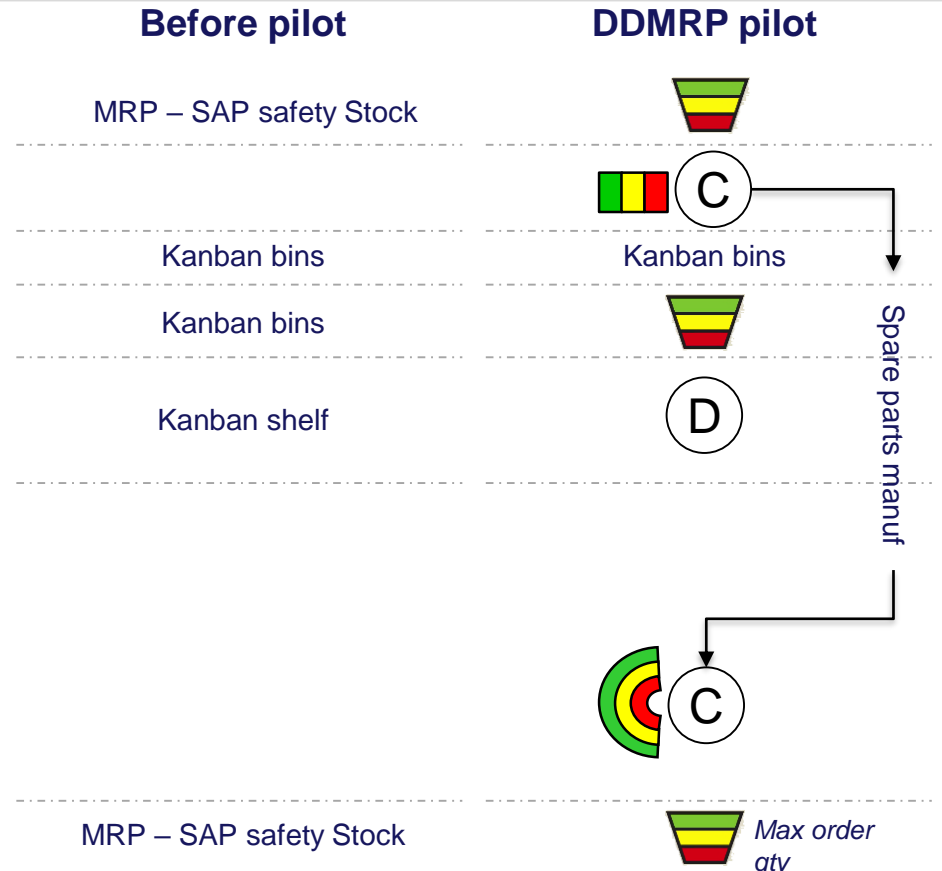
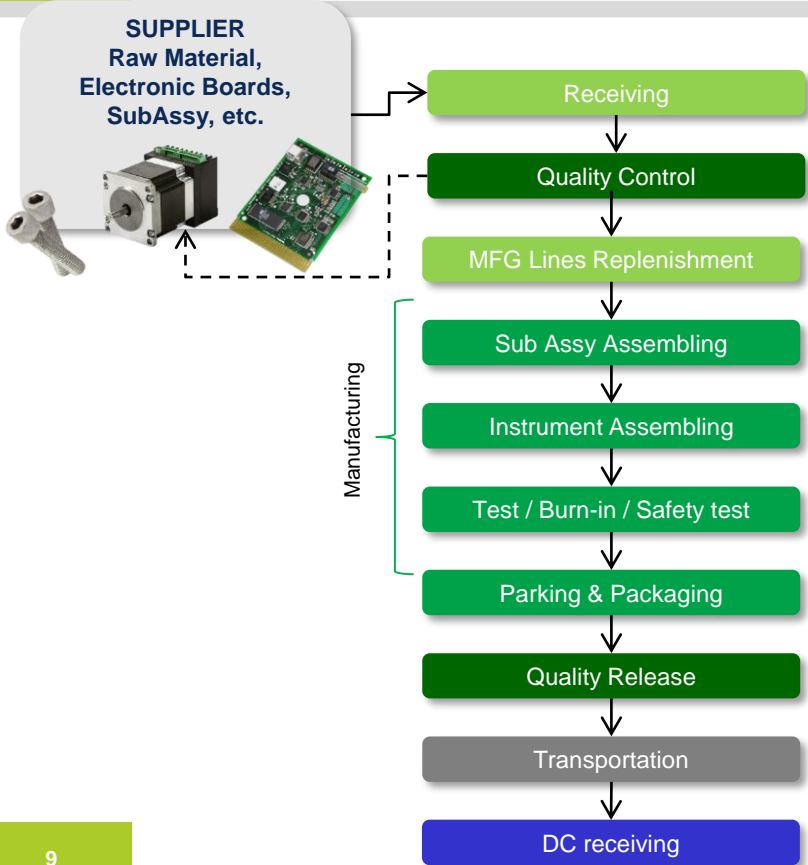
Audit of practices

Jun. 2018

Closing
pilot & go
for roll-out

DEMAND DRIVEN 1RST SCOPE – 2 MAJOR RANGES

WENT VERY MUCH INTO THE GEMBA



DEMAND DRIVEN PILOT QUANTITATIVE RESULTS

JUST AS EVERYONE



OTIF stable
At a very high level



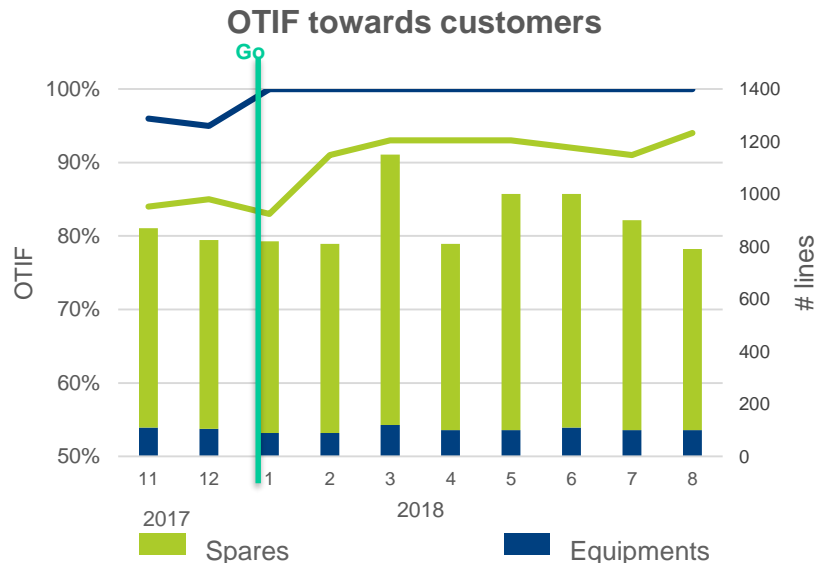
-2 to 5 months cash to cash cycle



Lead-time reduction:
70 to 18 days on instru.



-25% inventory overall
(plant+DC)



DEMAND DRIVEN 1RST IMPLEMENTATION

KEY QUALITATIVE RESULTS



Same language

Used by plant SC & IDC SC
And by all impacted services



Same customer

Objectives aligned all along the SC,
based on customer demand



Same way of working

through the sites
(incoming control, quality,
Sales Admin, ...)

- A lot more reactivity & relevancy on information & physical flows
- A lot more understanding between parties

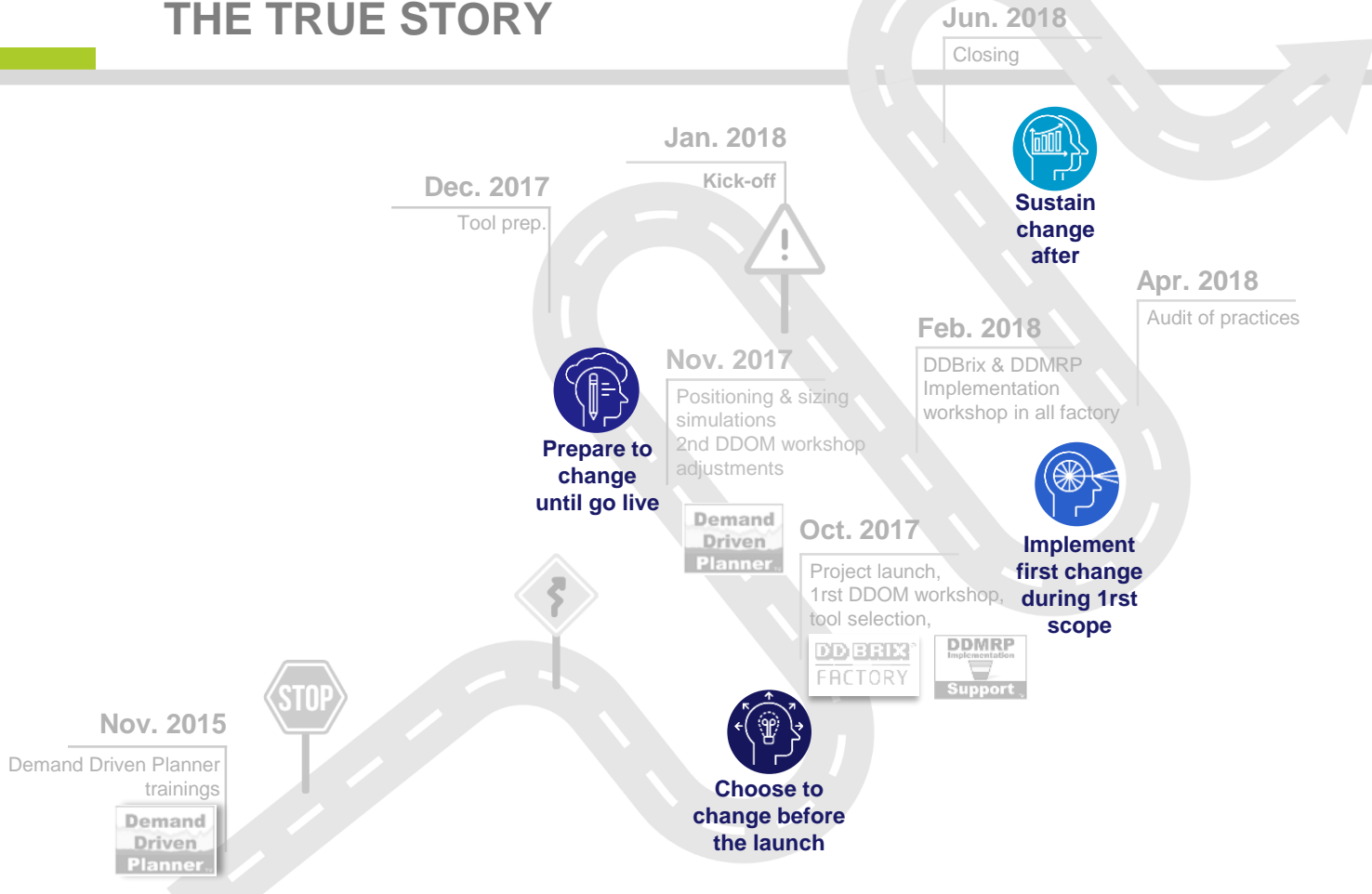
SUCH GOOD RESULTS...



**... necessitate
stamina!**

FOCUS ON CHANGE

THE TRUE STORY





CHOOSE TO CHANGE BEFORE THE LAUNCH



- A bit of schizophrenia...



- Passion and experience!



Demand Driven World™ 2017

position, protect, pull, adapt

Lyon, France July 6-7



Hosted by:



ASSOCIATION FRANÇAISE DE SUPPLY CHAIN MANAGEMENT

Conference Videos

- how to overcome that?



Accelerators of transformation



CHOOSE TO CHANGE



Attention points



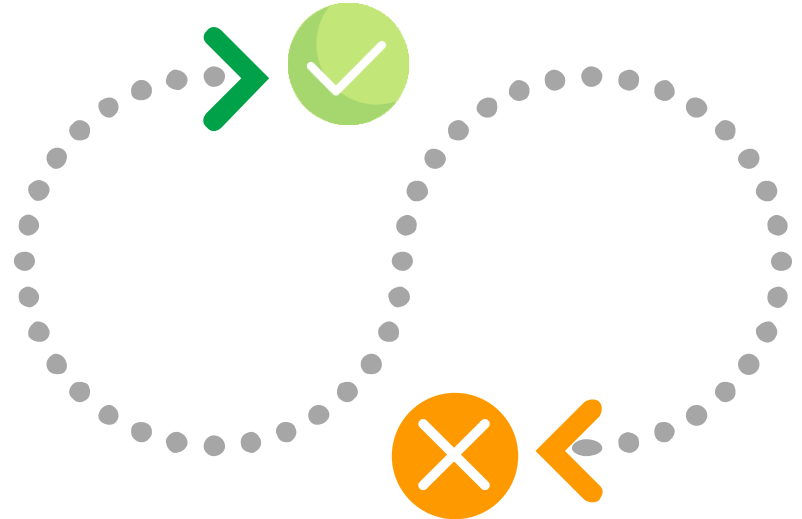
- **Very long decision time** (convince, investigate, budgets...)
- **Consultants key to « shakras »** opening at all levels and steering into the demand driven market

Our +



with top management -->
great sponsoring

- Demand Driven World 2017, case studies



Our -

- A big ongoing APS project on reagents



PREPARE TO CHANGE



- Training & certification for everyone

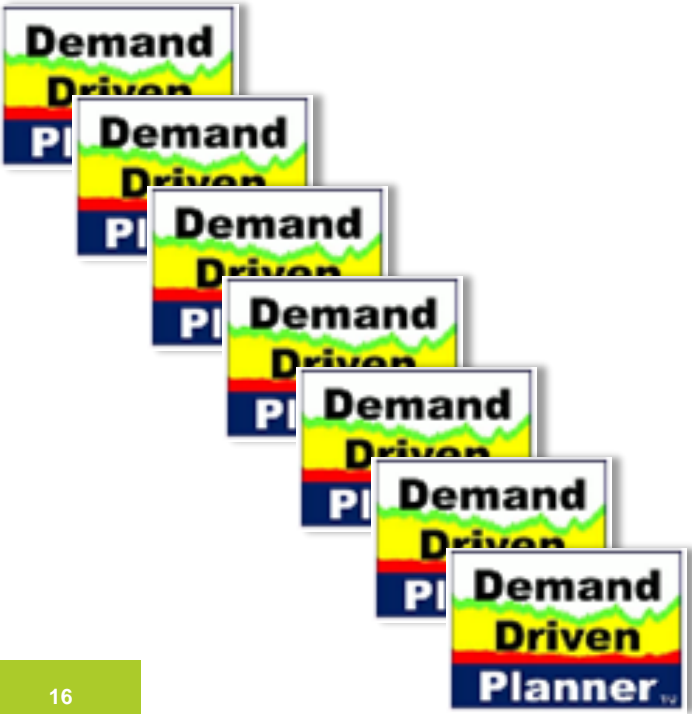
- Impactful scope

- Get to know

Major product line
2 Main instruments
& associated spare parts



- Highest runners
- Strong seasonality
- 536 raw materials
- 8 BOM levels
- 142 spare parts



How to size a buffer ? examples

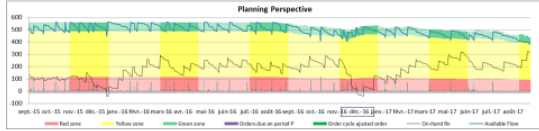
Mini Vidas simulation - Dynamic buffer

Parameters

- ADU calculated on 360 days
- Spikes taken into account at 45 days
- Lead-Time Factor: 0.2 (Long) – Variability factor: 0.2 (Low)
- Leadtime : 78 days

ADU	Calculé sur 360 jours	536
ADU	Calculé sur 45 jours	116
ADU	Calculé sur 90 jours	58
ADU	Calculé sur 180 jours	29
ADU	Calculé sur 360 jours	15

ADU: 536
ADU (45 jours): 116
ADU (90 jours): 58
ADU (180 jours): 29
ADU (360 jours): 15



Y5FG References – Final Assembly

Influence of Spike detection

ADU on 360 days	Spike detection:	Stock value (€)	Stock value (€)	Stock value (€)
536	No	7.4	6.0	4.0
536	80% of Red Zone on 45 days horizon	8.4	5.0	3.0
536	100% of Red Zone on 45 days horizon	8.4	2.0	1.0

Service Rate: ~1%
Stock value: ~5,2M€



PREPARE TO CHANGE



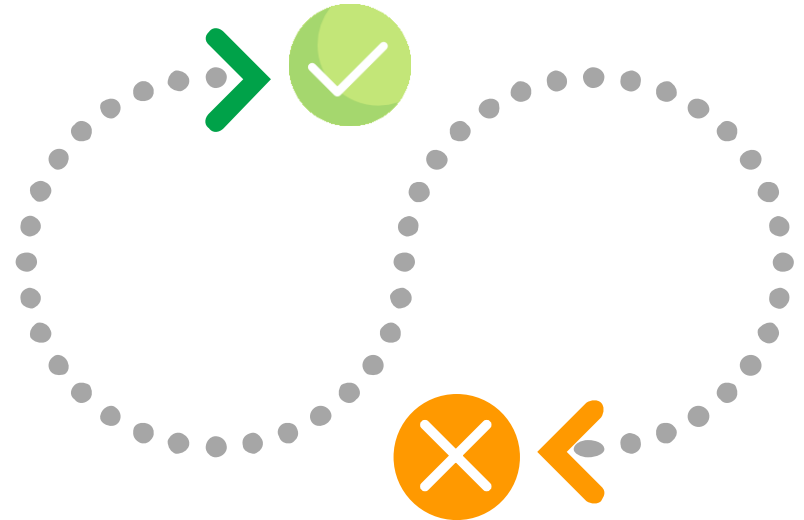
Attention points



- DDP training for all
- **Impactful scope**, incl. critical cases
- Make your life easier:
 - **Robust SC skills** in production site
 - **Good relationship** with pilot site(s)

Our +

- Common culture with manufacturing site



Our -

- Better communicate on **side effects of pilot start**



OUR WORST ENEMY AT PLANNING LEVEL

A..	Date	MRP element	Start/release date	MRP element data
	11.10.2018	Stock		
	11.10.2018	SafeSt		Safety Stock
	21.09.2017	PRqRel		0102504121/00010
	24.11.2017	PRqRel		5000878825/00020
	24.11.2017	PRqRel		5000878825/00100
	20.03.2018	PRqRel		5000865010/00010
	20.07.2018	Delvry		8006595126/00002
	28.09.2018	Delvry		8006889822/00002
	01.10.2018	POitem		6500513786/00001
	02.10.2018	Delvry		8006901624/00002
	04.10.2018	Delvry		8006904642/00001
	05.10.2018	Delvry		8006918827/00001
	08.10.2018	POitem		6500515698/00002



S...	Su...	Iss...	St...
0			
0			
0	HK04	EQ01	EQ01
0	ES01	EQ01	
0	ES01	EQ01	
0	AT01	EQ01	
0			EQ01
0			EQ01
1	IT01	EQ01	EQ01
0			EQ01
0			EQ01
0			EQ01
0			EQ01
0	IT01	EQ01	EQ01

- Constantly monitor, reassure, answer....



ON-BOARD WIDELY AND PROVIDE SOLUTIONS



● Usual position BEFORE

● What we did

Manufacturing

My OEE! My standard cost!

- No pressure on standard costs for 6 months
- Precise monitoring & explanations

Purchasing

What are these peak orders??!
Smaller MOQs?!

- Communication & DDBrix
- Constant routine on buffer management

Quality

I'm not impacted

- Communication & DDBrix
- Prioritization through buffer statuses

Controlling

OEE! Inventory increase? What
is the ROI?

- Communication & DDBrix
- Demonstrate cash velocity increase /
business case

Physical logistics

More shipments

- Communication & DDBrix
- Prioritization through buffer statuses



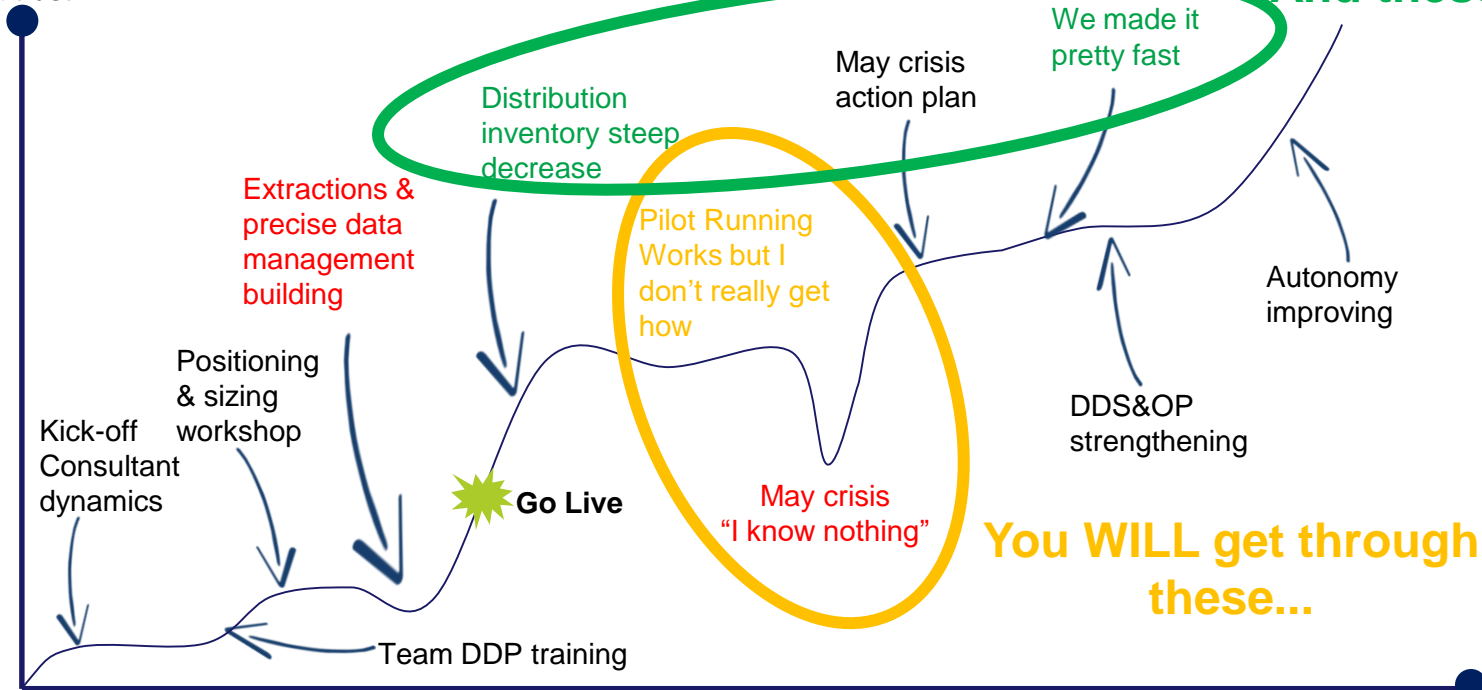
IMPLEMENT CHANGE

ANTICIPATE YOUR LEARNING CURVE



Understanding & trust

And these!



Time



IMPLEMENT CHANGE

ANTICIPATE YOUR LEARNING CURVE



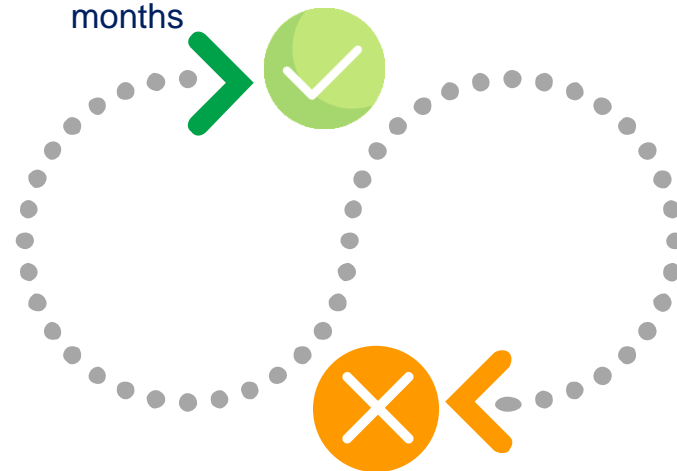
Attention points



- **Strong project lead** (results AND problem-solving oriented)
- **Mindset change** → prepare for shocks, consultants help.
- **Constant, unfaltering sponsorship**
- **DDI compliant tool** → great enabler, evolving with the Body of Knowledge

Our +

- **Quality, purchasing, engineering** very well on-boarded (serious gaming)
- **2 FTE for project mgt**– 1 per site
- Audit of practices by consultants after 3 months



Our -

- Better prepare common language & **translation of new KPIs in our words**
- Mindset change is **more important for manufacturing, gemba support is prevalent**



SUSTAIN CHANGE

IT IS JUST THE BEGINNING



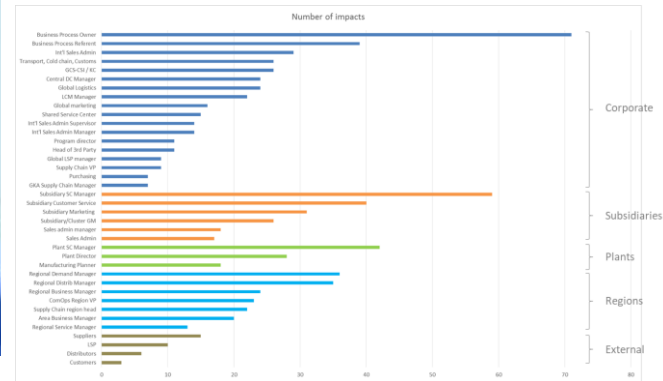
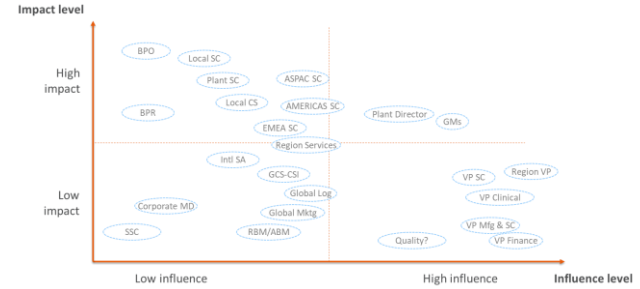
● Find your tireless leader



● Learn to sell to indomitable people



● Be prepared





SUSTAIN CHANGE

IT IS JUST THE BEGINNING



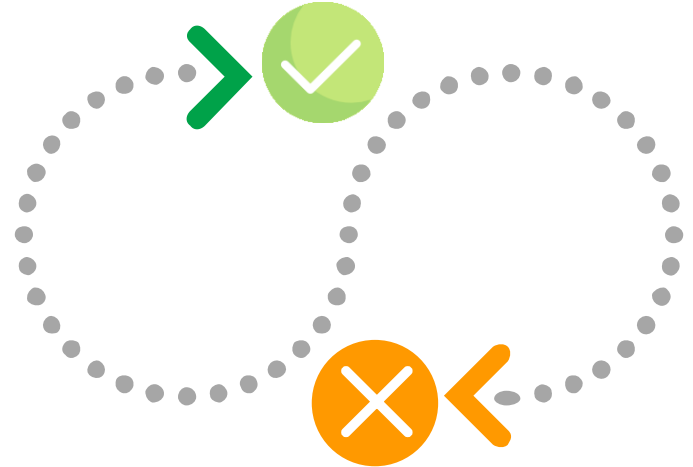
Attention points



- A transformation leader needed in the long run, with a **rallying & promoting personality**
- **Learn to sell the concept**
- **Use your change allies** in each function
- Measure **impact & magnitude of change** for next steps

Our +

- **Keep project resources** to anticipate roll-outs
- **Regular communication** aroused keen interest → build on success

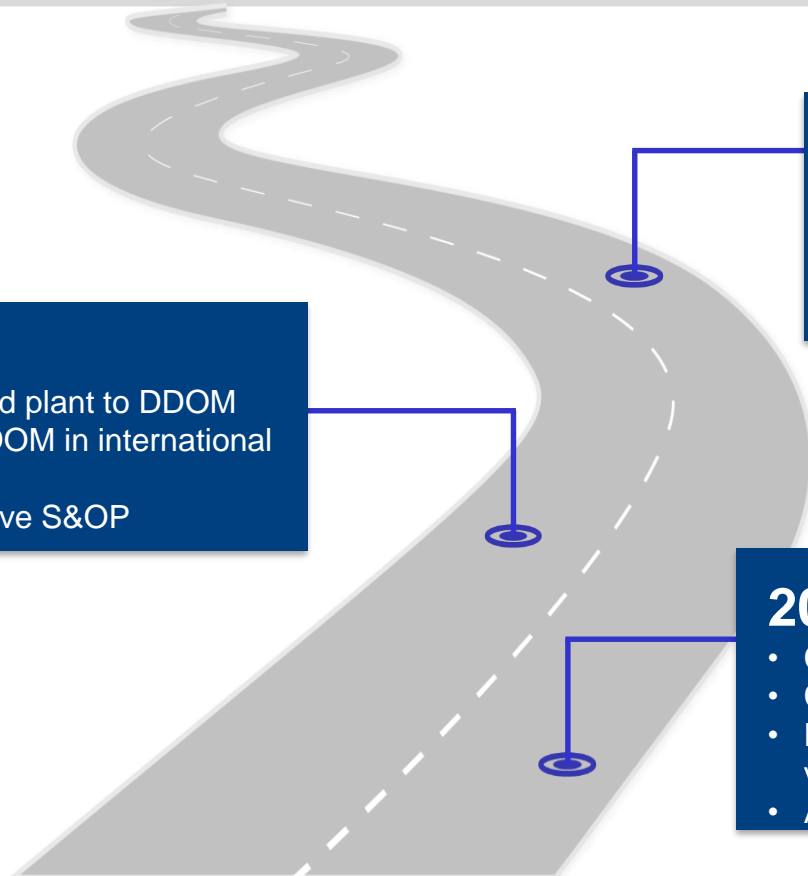


Our -

- Develop skills for **buffer positioning**
- Prepare for **widening**: internal training documents, project steps, pre-simulations...

NEXT STEPS

GO FULL DEMAND DRIVEN FOR EQUIPMENTS & SPARES



2020

- Switch 2nd & 3rd plant to DDOM
- All spares in DDOM in international DCs
- Integrate Adaptive S&OP

2021

- Manage subsidiaries DCs & VMI with DDMRP
- Investigate for reagents, review potential software

2019

- Complete necessary IT interfaces
- Complete DDS&OP maturity
- Deploy DDOM in Firenze – focus on velocity
- All common refs in DDMRP between DCs



QUESTIONS



?



ANSWERS

THANKS FOR YOUR ATTENTION