



## Demand Driven Planning in Lubricants Supply Chain

A new planning engine to drive a step-change in performance

Or

Incrementalism isn't enough

Nick Lynch

Global Planning Strategy & Performance

# Definitions & cautionary note

The New Lens Scenarios are part of an ongoing process used in shell for 40 years to challenge executives' perspectives on the future business environment. We base them on plausible assumptions and quantification, and they are designed to stretch management to consider even events that may be only remotely possible. Scenarios, therefore, are not intended to be predictions of likely future events or outcomes and investors should not rely on them when making an investment decision with regard to Royal Dutch Shell plc securities.

It is important to note that Shell's existing portfolio has been decades in development. While we believe our portfolio is resilient under a wide range of outlooks, including the IEA's 450 scenario, it includes assets across a spectrum of energy intensities including some with above average intensity. While we seek to enhance our operations' average energy intensity through both the development of new projects and divestments, we have no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10-20 years.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this presentation "Shell", "Shell group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this presentation refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to "joint ventures" and "joint operations" respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest.

This presentation contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this [report], including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this presentation are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Royal Dutch Shell's 20-F for the year ended December 31, 2016 (available at [www.shell.com/investor](http://www.shell.com/investor) and [www.sec.gov](http://www.sec.gov)). These risk factors also expressly qualify all forward looking statements contained in this presentation and should be considered by the reader. Each forward-looking statement speaks only as of the date of this presentation, Oct 11th 2018. Neither Royal Dutch Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this presentation. This presentation may contain references to Shell's website. These references are for the readers' convenience only. Shell is not incorporating by reference any information posted on [www.shell.com](http://www.shell.com). We may have used certain terms, such as resources, in this presentation that United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website [www.sec.gov](http://www.sec.gov).

# About shell in 2016

92,000

Average number of people  
we employed

\$21 billion

Cash flow from operating activities

30 million customers

Served every day through 43,000 Shell-branded retail stations

30.9 million tonnes per annum

LNG liquefaction volumes

2%

Our share of the world's  
oil production

70+

Number of countries  
in which we operated



50%

Share of our production that was  
natural gas

1%

Our share of global supply of energy

3.7 million

Our production of crude oil  
and natural gas, in barrels  
of oil equivalent a day

57.1 million

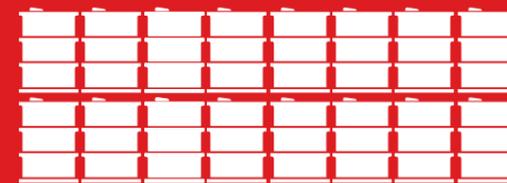
Tonnes of LNG we sold

\$1.0 billion

spent on R&D

\$102 million

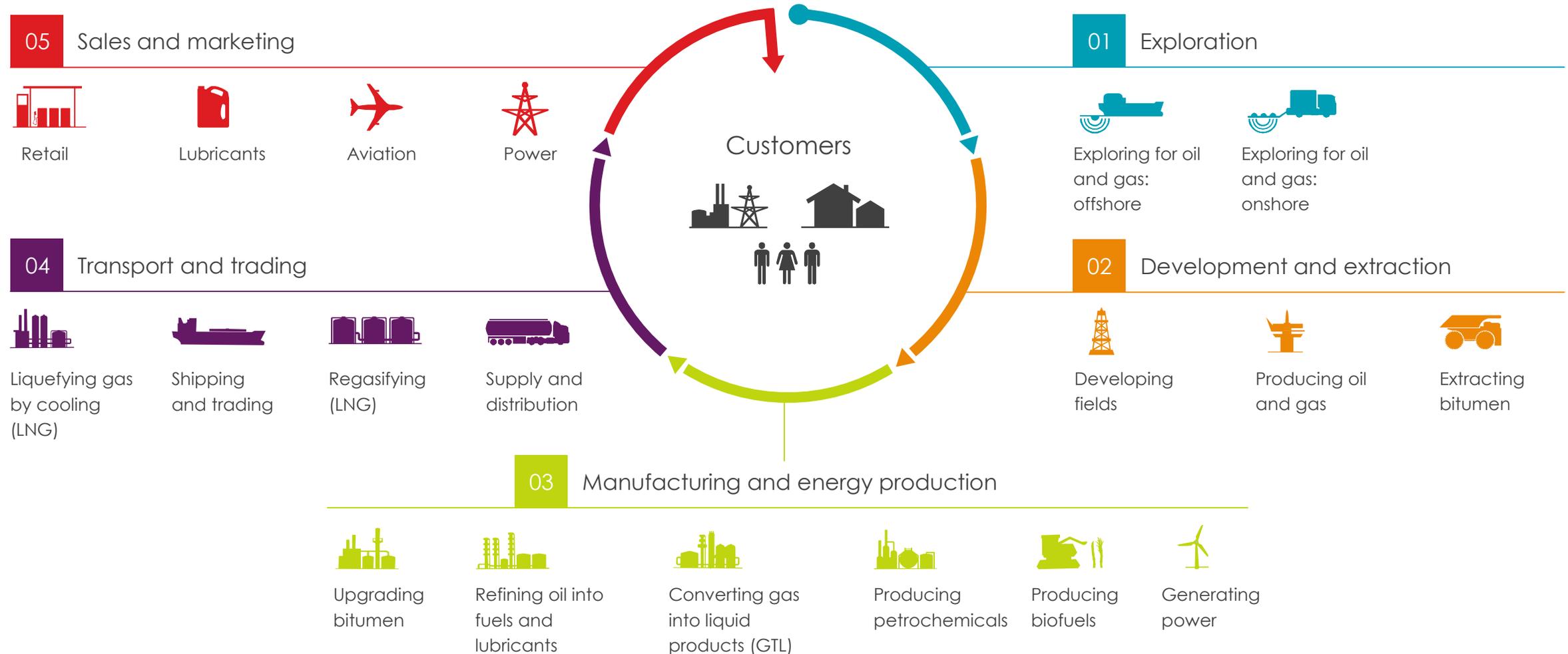
Spent on voluntary social investment  
worldwide



1 million tonnes

Amount of CO<sub>2</sub> captured by Quest  
CCS facility in 2016

# Shell business overview

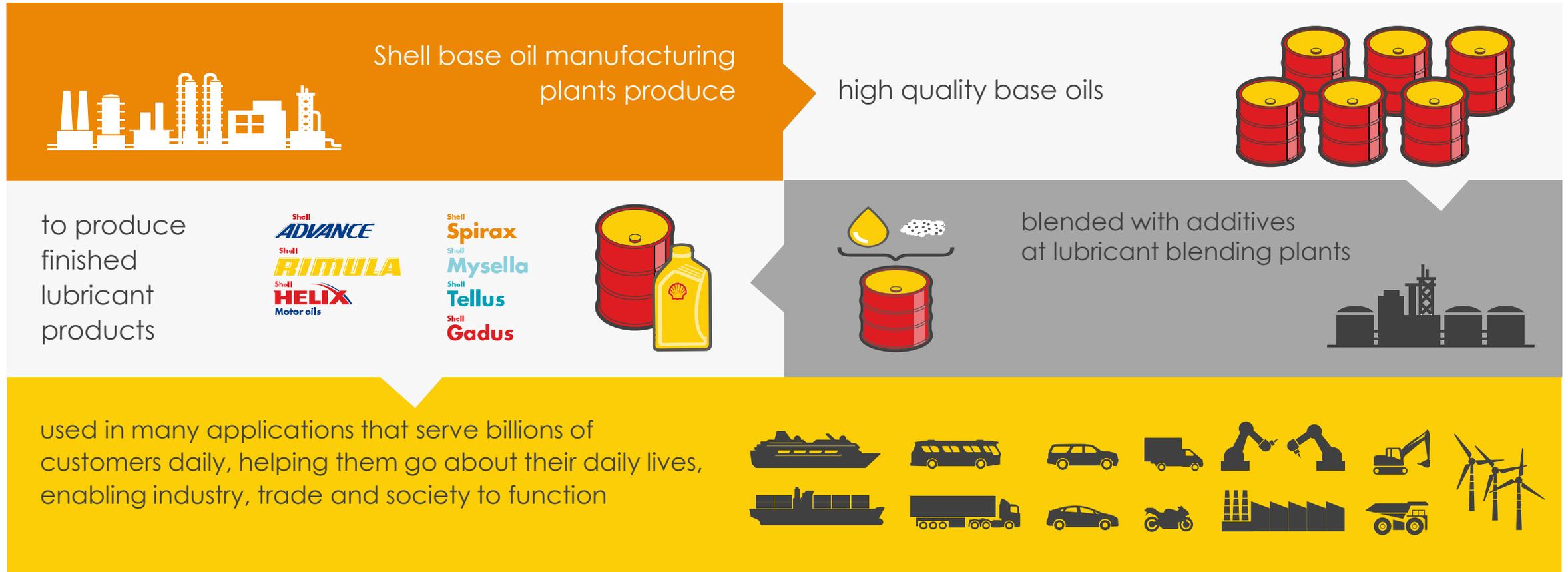


# Lubricants

- Shell has been the global brand leader (in terms of market share) in finished lubricants for the last 11 years, according to Kline & Company
- We make and sell a wide variety of lubricants for the automotive, heavy-duty transport, mining, power generation, construction and general manufacturing sectors
- Our leading brands include Shell Helix, Shell Rotella, Pennzoil, Quaker State, Shell Tellus and Shell Rimula
- Our lubricants are available in more than 100 countries
- Through technical partnerships with major motor racing teams, we transfer the technology of the race track to the road



# What is the Lubricants Supply Chain?



**LSC enables Shell lubricants to remain a credible choice for customers year after year**

# GLOBAL LUBRICANTS SUPPLY CHAIN



**OFFICIALLY THE NO.1 GLOBAL LUBRICANTS SUPPLIER**

for ten consecutive years, supplying products and services across multiple sectors in over 100 countries



**PRODUCE 3000 AND OVER SALEABLE PRODUCTS OVER 10,000 SKUs**

OVER  
**3,000**  
EMPLOYEES

**60**  
NATIONALITIES

**15 TIME ZONES**  
WITH LSC EMPLOYEES



OVER  
**2.5**  
MILLION  
tons of baseoils  
used per year

**2**  
MILLION+  
bottles filled per day



**30**  
MILLION  
deliveries per year  
directly and by  
distributors

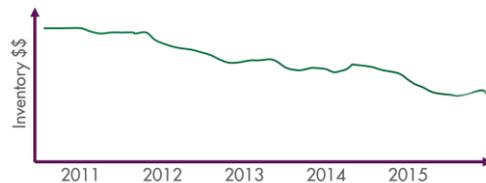
**5 BILLION+**  
litres of Shell Lubricants  
sold each year

**8,000**  
OCEAN-GOING  
VESSELS  
lubricated at any  
point in time using  
Shell lubricants

Reduce our  
carbon intensity  
by **50%**  
BY 2030

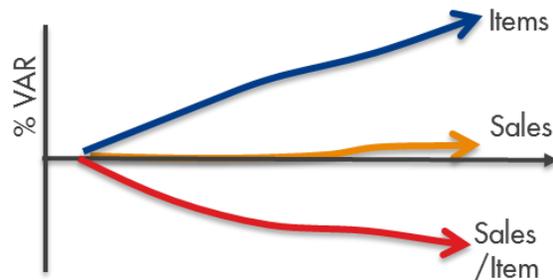
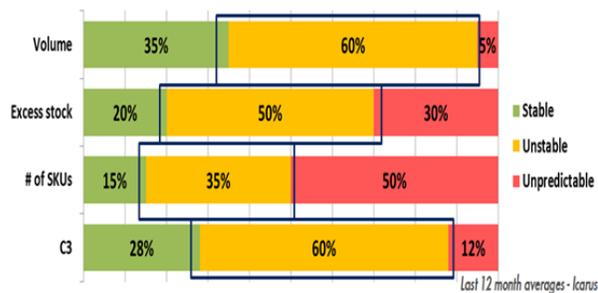
## LSC – A Brief History

- 2006-2012 SAP single instance
- Standard processes (One-size-fits-all)
- Standard Organisation design, roles and metrics
- Regional and Local planning
- SAP APO (DP, SNP, PPDS **and XL !**)
- 2011/12 – *Demand Sensing* & MIO global rollout
- S&OP evolved into *IBV* with advanced analytics
- DIO almost halved 2011-2016
- 2015 Oil price drops
- Performance focus intensifies



# 2015 – Planting the seeds of a Paradigm Shift

- Future complexity
- Forecasting remains challenging
- Working harder vs diminishing returns
- Incremental tweaks and fixes not sustainable.
- Fewer opportunities
- Time for a step-change ?
- First look at DD in 2015



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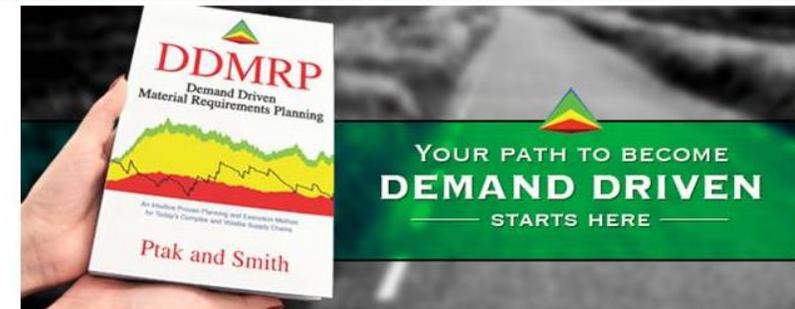


Demand Driven <sup>TM</sup>  
INSTITUTE

Transforming push and promote  
into POSITION, PROTECT and PULL



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Our Mission: Advance demand driven strategy and tactics in the global industrial community

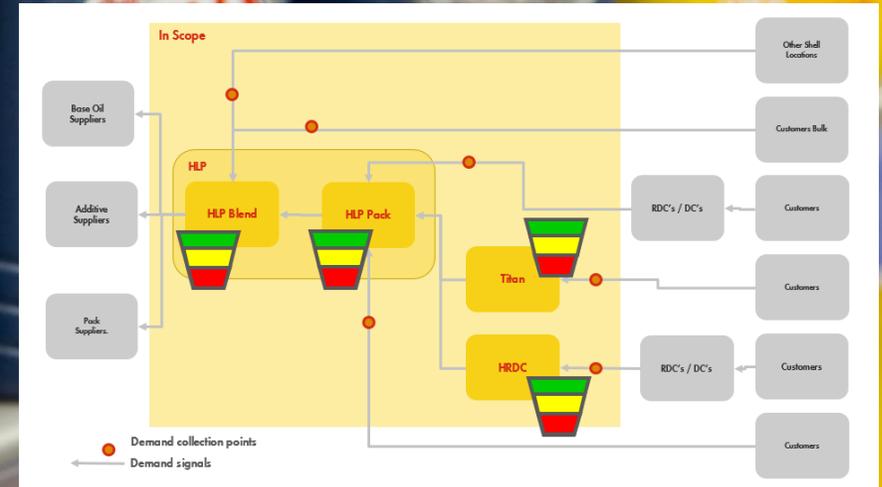
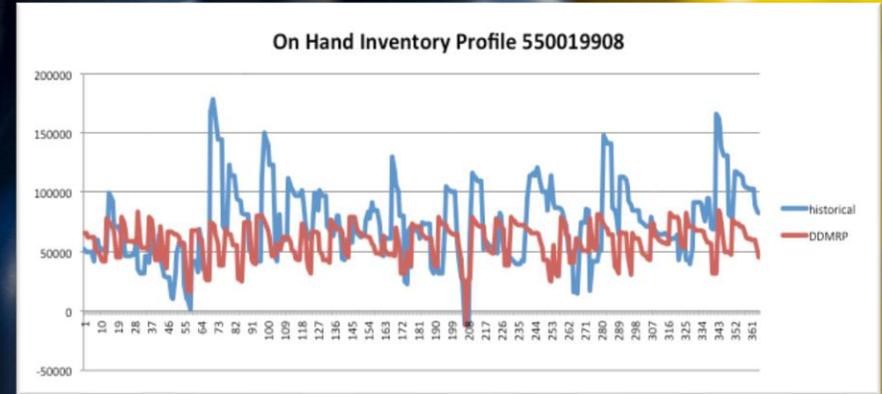
# DD – The Road to Change

## 2016

- Worked with  SmartChain
- Educate & Simulate
- North America, Europe and Asia
- Test results & validate
- Build a business case - \$\$\$
- Software selection

## 2017

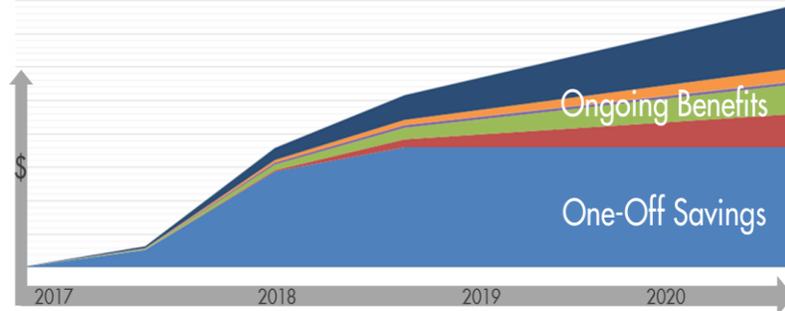
- Global Design, Build, Test, Document
- Pilot – MED Cluster and Krakow Planning Centre



**Orchestr8**<sup>®</sup>  
Demand-Driven Innovation. Epic Results.

# The Value Proposition - \$\$\$

- INVENTORY
- OPEX
- COGS
- OTIF

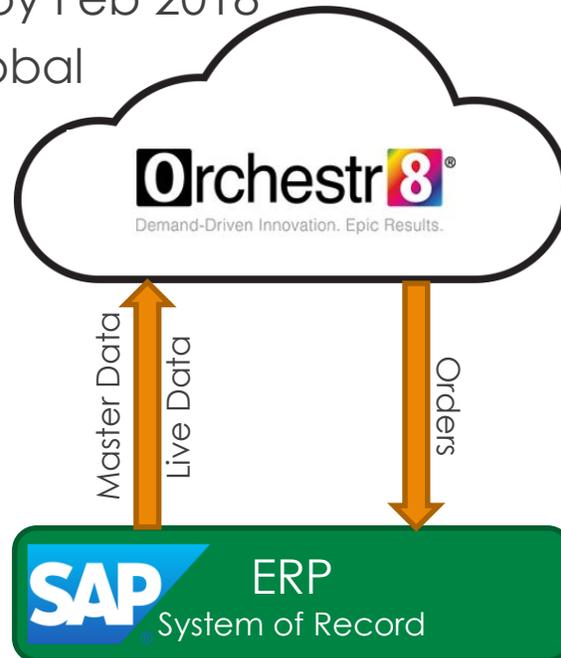
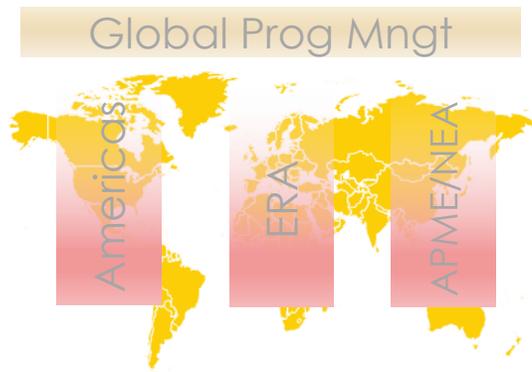


- Noise
- Stability
- Capacity
- Waste
- DILO
- Safety



2018

- Global and Regional program in place
- Deployment in Americas, Europe and Asia
- DD Leader and Planner training and certification
  - 200+ completed by Feb 2018
- DD1.0 targeted for global completion in 2020



Spain  
Italy  
Turkey  
Egypt  
Malaysia  
Philippines  
France  
Russia  
North America (October)



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## Critical Success Factors & Learnings

- **Change Management**
- Early business engagement
- X-Functional Teams – it is NOT “just an IT project”
- Leverage ERP backbone (transactions and master data)
- **Methodology (Design, Develop, Deploy, Measure, etc)**
- Motivation, training and support
- **Mindsets & behaviours & habits**
- **Significant increase in process visibility & transparency**
- **Process discipline (DDS&OP, E2E Ways of working, compliance)**
- Scope, timeline and network complexity (old world/new world)
- Focus & Leadership
- Master data, Master data, Master data, Master data, Master data





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# Questions ?

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## Nick Lynch

- Nick's supply chain career covers global and operational roles in leading FMCG, Pharmaceutical and Downstream Oil and Gas.
- He has driven a major change agenda into the Shell Lubricants supply chain over the last 11 years bringing Demand Sensing, Advanced Scheduling, Integrated Business Planning and now Demand Driven planning.
- Nick believes that simply working harder at the same things is not enough to prepare leading supply chains for tomorrow's challenges.

