

# NATHAN

CAN DIGITAL TECHNOLOGY  
HELP OIL & GAS ORGANIZATIONS  
ACCELERATE THEIR SUCCESS?

**WALTER PESENTI**  
SENIOR VICE PRESIDENT





## ABOUT THE SPEAKER – WALTER PESENTI

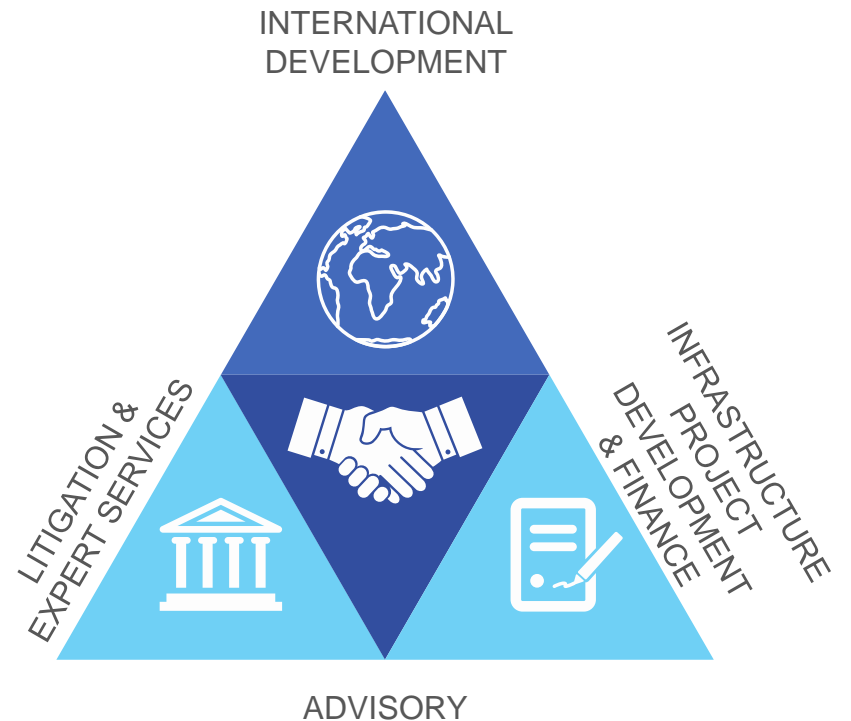
- ▶ 30 years of **downstream and petrochemicals experience** with ExxonMobil, Chevron, Shell, BP, and a Big Four consulting firm
- ▶ First-hand **experience with operational excellence, asset management, digital and capital projects**
- ▶ Developed and implemented a plethora of business transformations **reducing risk exposure and producing savings** ranging from \$50 million/year to \$1,400 million/year
- ▶ **Executive MBA and BS in Business Administration** from Pepperdine University, **BS in Industrial Engineering** from UCLA, and **Petroleum Technician Certification** from INAPET



# ABOUT NATHAN

Nathan is a private international economic and analytics consulting firm that works with government and commercial clients around the globe to deliver practical solutions and achieve lasting results. Whether building frameworks for economic growth or navigating regulatory hurdles, securing infrastructure financing or evaluating and assessing disputes, Nathan's experts serve as trusted partners, offering clients the analysis, technical advice, and strategies they need for sound decision-making. Known for both technical and service excellence.

Nathan has corporate offices in the US, UK, and India and more than 40 program offices around the world.





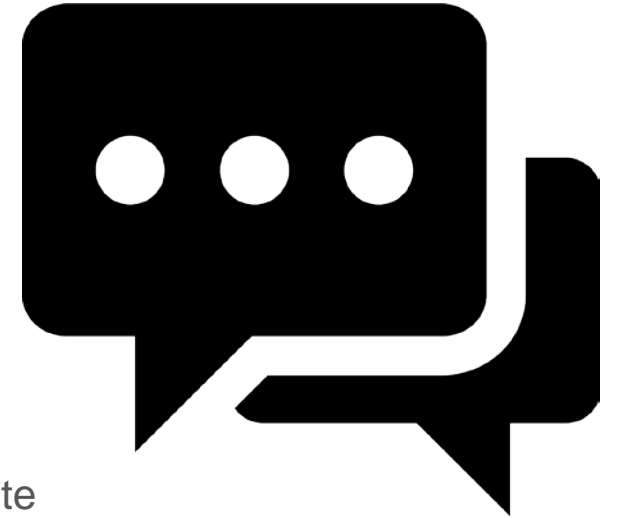
# TODAY'S WEBINAR – WHAT WE'RE GOING TO DISCUSS

## ▶ FACTS WE KNOW

- ▶ Use of data in the oil & gas sector is nothing new
- ▶ The oil & gas sector was at the leading edge of data collection

## ▶ TODAY'S DISCUSSION TOPICS

- ▶ How to illustrate success factors, challenges, and routes to optimize and incorporate digital technology
- ▶ Discuss different types of behavioral changes required by leadership to make digital work



**IN ORDER TO LEAD, COMPANIES NEED TO FULLY EMBRACE THE DIGITAL REVOLUTION**



# TOPICS OF DISCUSSION – CASE STUDIES

## MANUFACTURING TRANSFORMATION

Refining & Chemicals

## END-TO-END TRANSFORMATION

Downstream & Upstream

## VALUE CHAIN TRANSFORMATION

Oil & Gas

## TYPICAL VALUE REALIZATION AND TIMING FOR A DIGITAL TRANSFORMATION

# MANUFACTURING TRANSFORMATION

## Refining & Chemicals

### ▶ THE SETTING

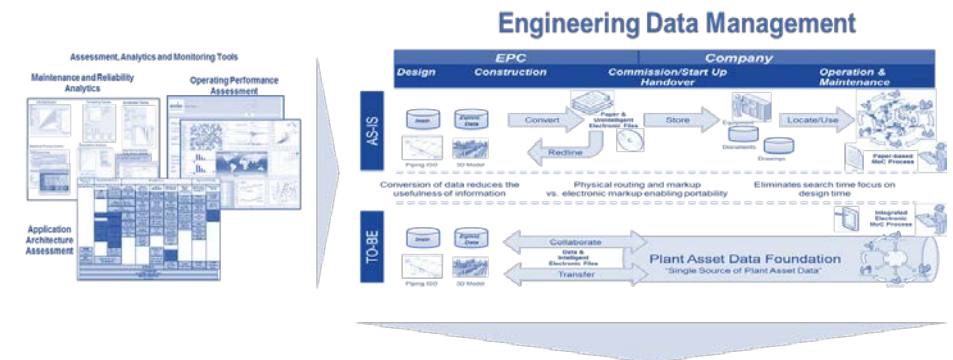
- ▶ Need for a globally consistent operating model to leverage a shared service model
- ▶ Project included operating model definition, business process optimization, and pilot activities across supply chain, product lifecycle management, engineering data management, and maintenance

### ▶ APPROACH

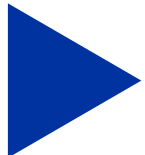
- ✓ Performed with business involvement
- ✓ Started with people and process transformations
- ✓ Piloted at a site
- ▶ Developed and implemented technology and rolled to all sites

### ▶ RESULTS

- ↑ Full benefits were realized over 18 months (\$ 650-700 M)



**BENEFITS**  
Program has been established with each member project having an expected return of more than 50% = \$ 650 - 700 M/year



Involving business in the Digital transformation accelerates implementation and embedment

# VALUE CHAIN TRANSFORMATION

## Oil & Gas

### ▶ THE SETTING

- ▶ Improvements across the entire value chain
- ▶ New governance model
- ▶ New and integrated tools for Hydrocarbon Supply Chain and Refineries
- ▶ Included all processes and functions related to operations and maintenance including: supply chain, finance, human resources, and information management

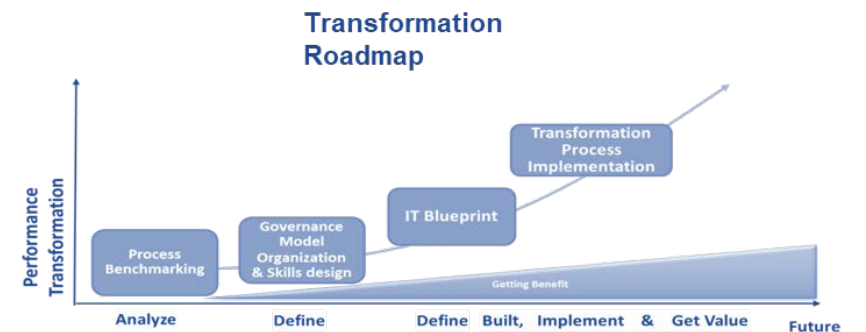
### ▶ APPROACH

- ✓ Performed with business, IT and headquarters involvement
- ✓ Started with people and process transformations
- ✓ Delivery, ownership, and solution sustainability through use of our proven change enablement methods
- ✓ Implemented across the entire organization
- ▶ Developed and implemented technology and rolled to all sites

### ▶ RESULTS

- ↑ Full benefits were realized over 12 months (\$ 1.3 -1.6 B)

**Involving business, IT and HQ in the Digital transformation accelerates alignment, implementation and embedment**



#### BENEFITS

As a result of the analysis, savings including Production Planning and Scheduling, Oil Movement, Operations Execution, Maintenance, Reliability and Quality (\$ 1.45 bbl. Margin improvement) = \$ 1.3-1.6 B/year

# END-TO-END TRANSFORMATION

## Upstream & Downstream

### ▶ THE SETTING

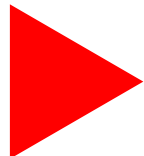
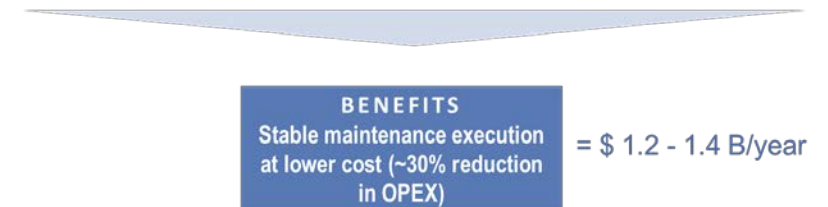
- ▶ Multi-year enterprise transformation program Operations, maintenance, supply chain, finance, human resources, and information management
- ▶ Operating model redesign
- ▶ Process alignment
- ▶ Technology integration

### ▶ APPROACH

- x Performed at headquarters
- x Stated with technology - On hold after completing design
- ▶ Had to perform people and process transformations
- ▶ Implemented technology across all sites

### ▶ RESULTS

- ↓ Benefits started to realize after 2 years and took additional 2.5 years to obtain full benefits (\$ 1.2 –1.4 B/year)

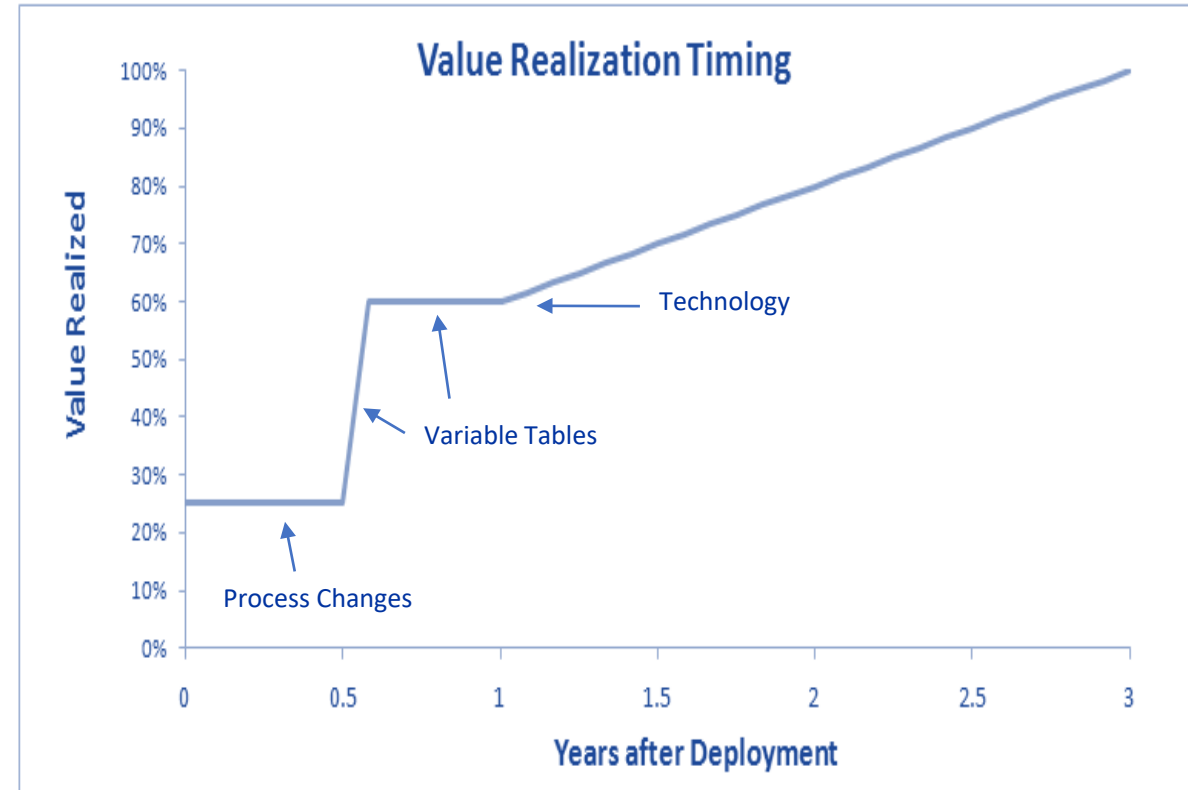


**Starting at HQ and with technology will slowdown the value realization and greatly increase the implementation effort**



# TYPICAL VALUE REALIZATION AND TIMING FOR A DIGITAL TRANSFORMATION

- ▶ Digital implementation cycle is getting shorter (in many cases, less than ½ the time it used to take 5-6 years ago) driven by:
  - ▶ Urgency of the business to achieve sustainable and competitive benefits (un-tangible and tangible)
  - ▶ Front line needed to communicate with experts located at remote locations
  - ▶ New generation of crafts and engineers are more inclined to utilize technology for their work
  - ▶ New way of working is driving digital to become part of the work processes



**Value realization cycle is getting shorter as the organizations are becoming digitally mature**



# THREE KEY TAKE-AWAYS

ONE

MAIN SUCCESS FACTORS WITH DIGITAL IMPLEMENTATION ARE:

- PEOPLE
- BUSINESS CULTURE

TWO

BUSINESS CASE NEEDS TO BE WELL DEFINED, AND MUST BE STEWARDED AND CONSISTENTLY COMMUNICATED. ADJUSTMENTS HAPPEN. FLEXIBILITY IS KEY

THREE

STRONG EFFORT NEEDS TO BE PLACED ON SECURING EXPOSURE TO SENSITIVE DATA





Q & A





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