



IIoT Enabled Manufacturing Quality
Transformation and Digitization of
Manufacturing Plants

(Sense – Alert - Assure)

14th December, 2018

Presentation Flow

- About Altizon
- IIoT Business Use Cases with Financial Benefits
- Live Demonstrations of following IIoT Use Cases
- Case Studies
- Learnings from Projects
- Q&A



We believe



In the power of data, to challenge the status quo and embark on a fundamental transformation journey

In building deep meaningful and infinite relationships with our employees, partners, clients and investors

In harnessing the power of open source technologies and collaborative commons to give ultimate freedom to our customers and community

Globally Recognized



Recognized in Gartner Magic Quadrant
for Industrial IoT Platforms 2018

NETWORKWORLD®

Altizon in 10 Hot IoT
Startups to Watch in 2018

F R O S T
&
S U L L I V A N

Leadership in Product
Innovation Award 2017

BCG

CB INSIGHTS

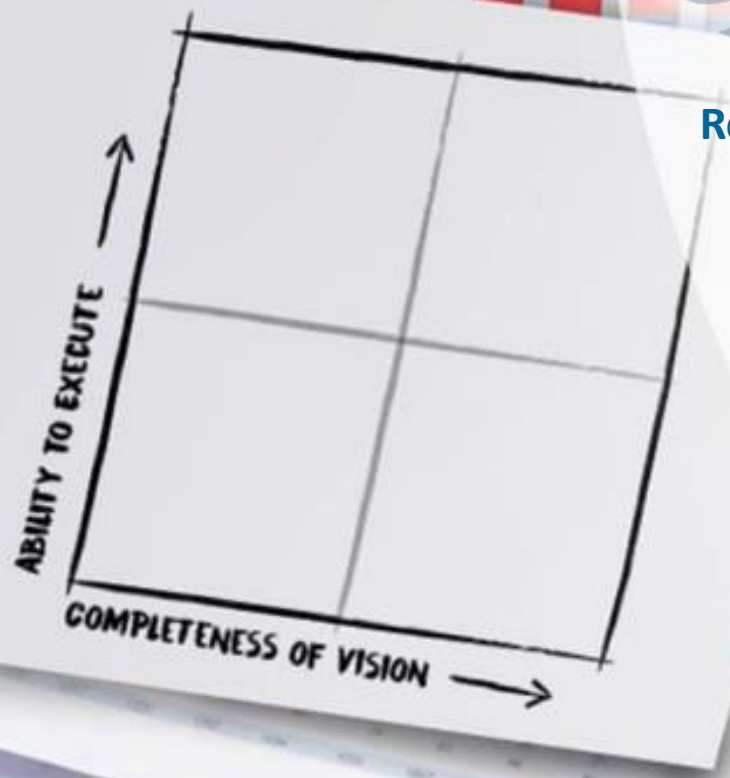
Everest Group
From insight to action.

FORRESTER®

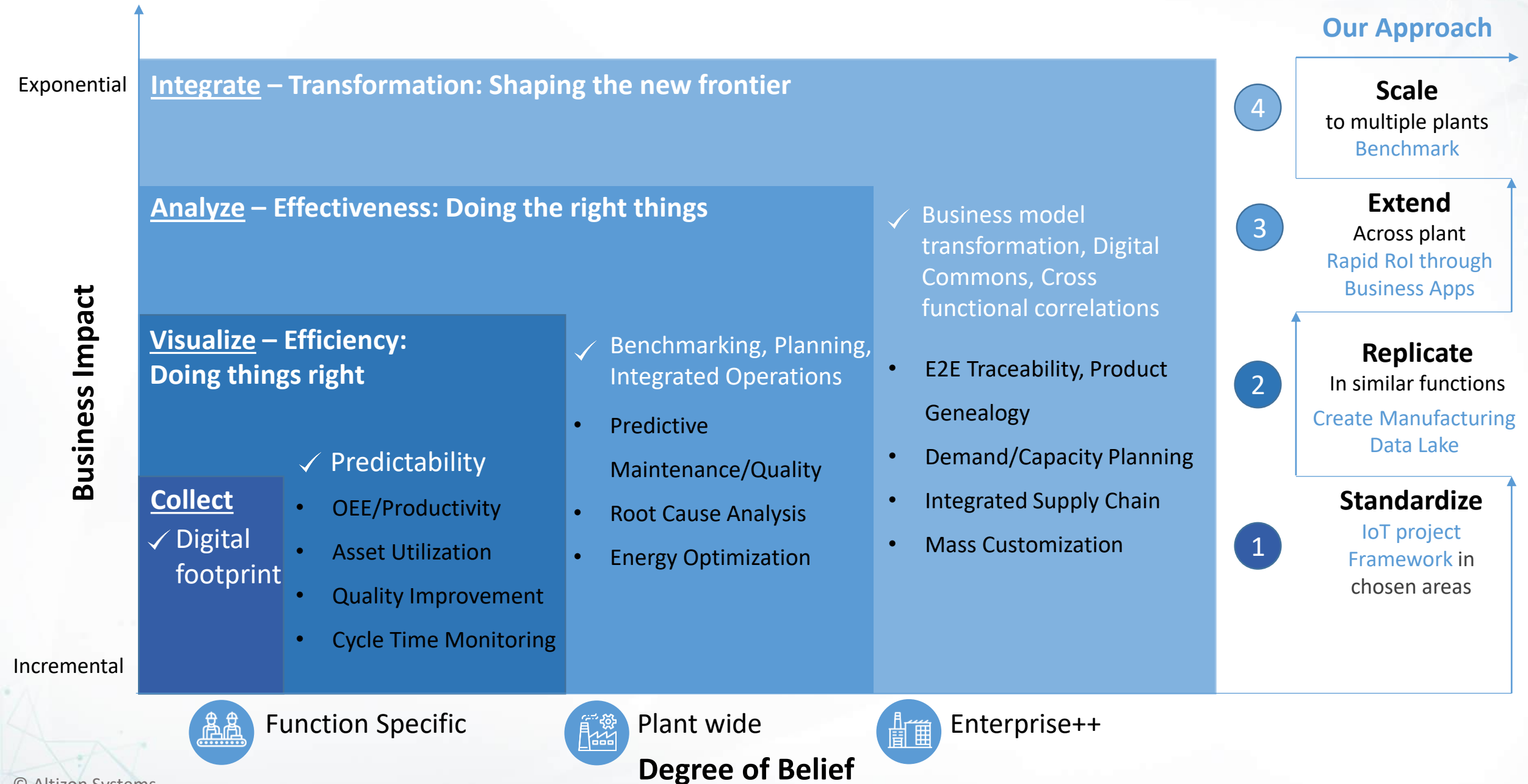

machnation

 Microsoft
Ventures

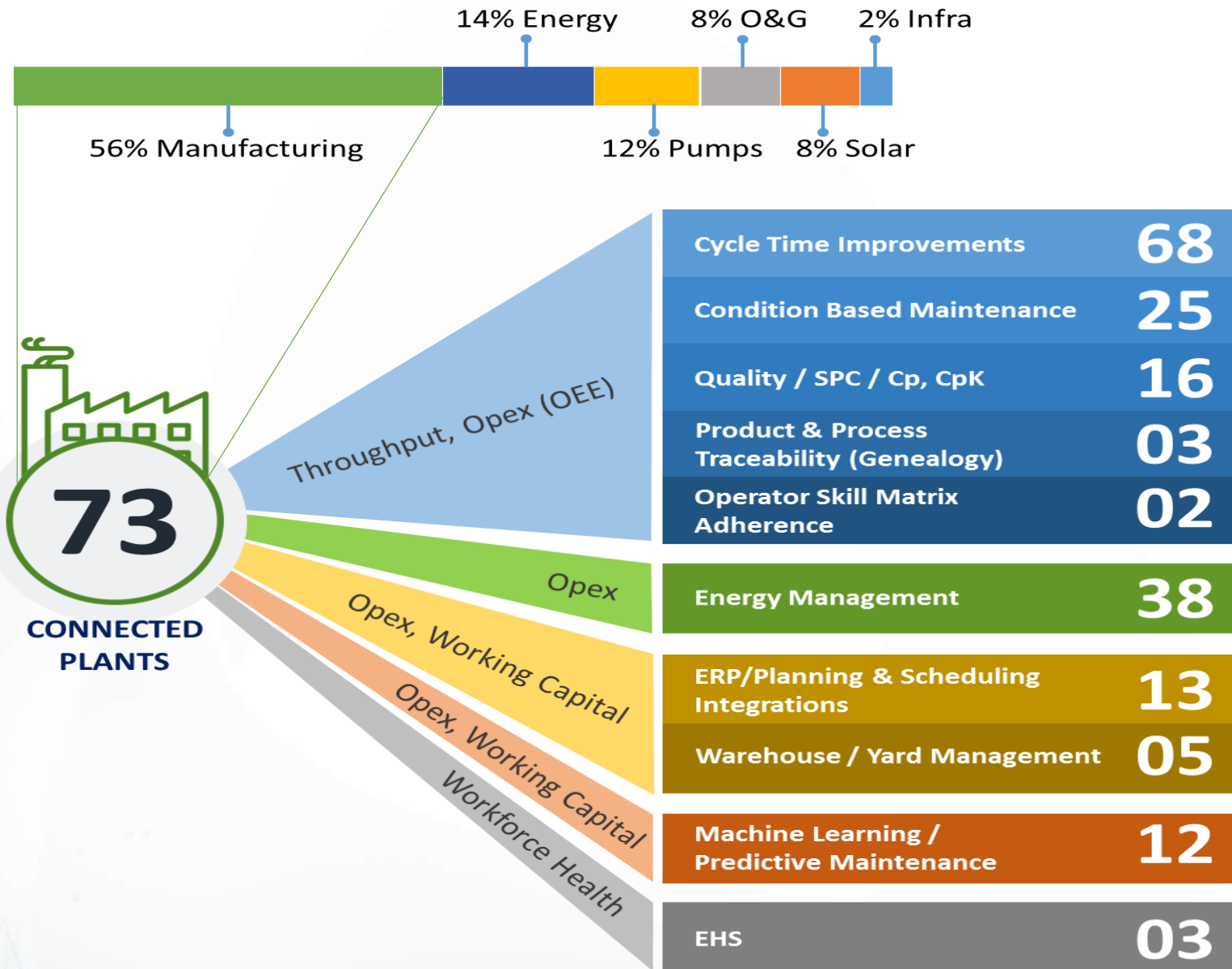
VDC | Research
Insights for the Connected World



Digital Transformation Journey with the power of IoT



Digital Transformation for 130+ Enterprise Accounts



CUSTOMER BENEFITS



Sample Client Journeys

Manufacturing



Remote Assets



Centers of Excellence



NIT Trichy
IoT Lab

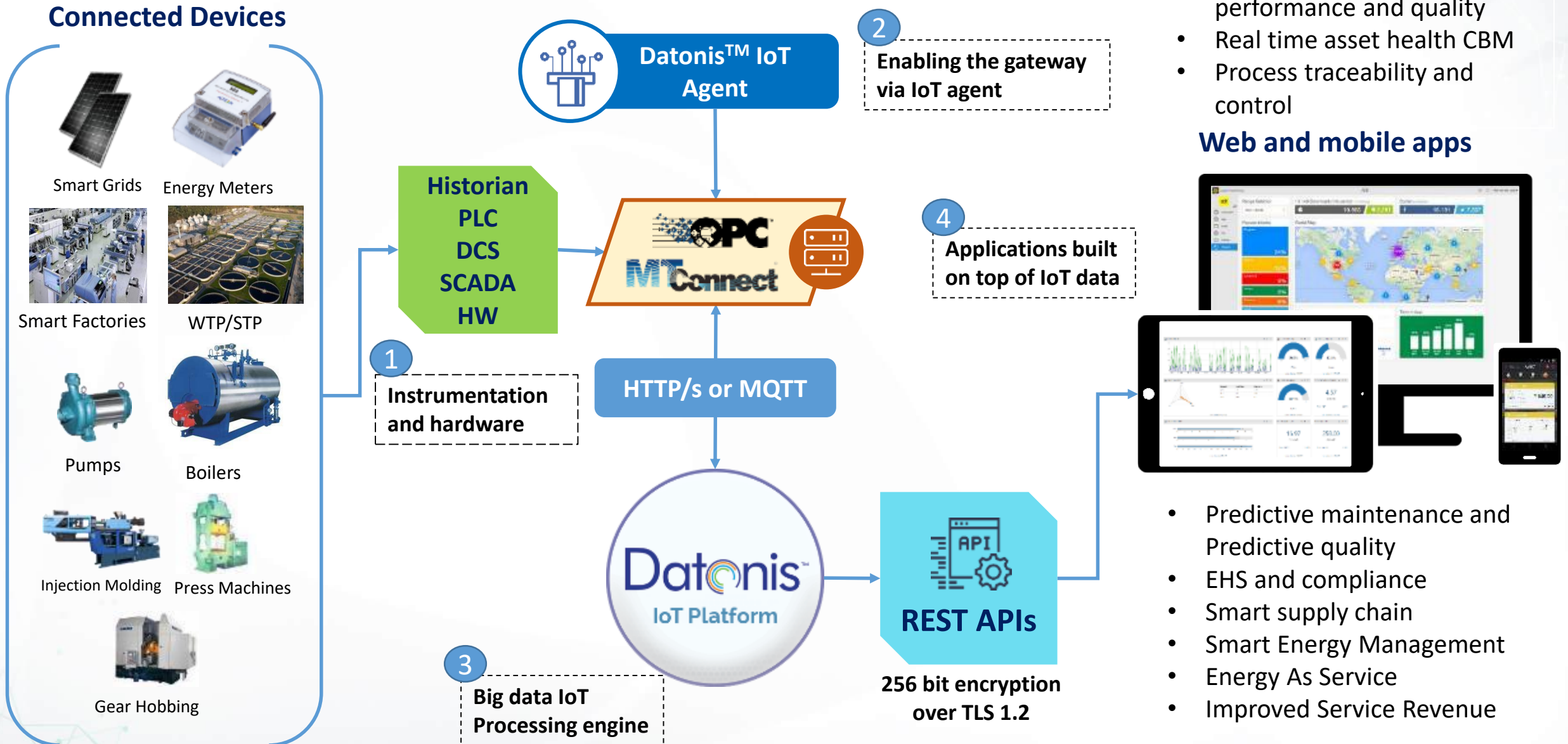


GTTC Karnataka
Govt

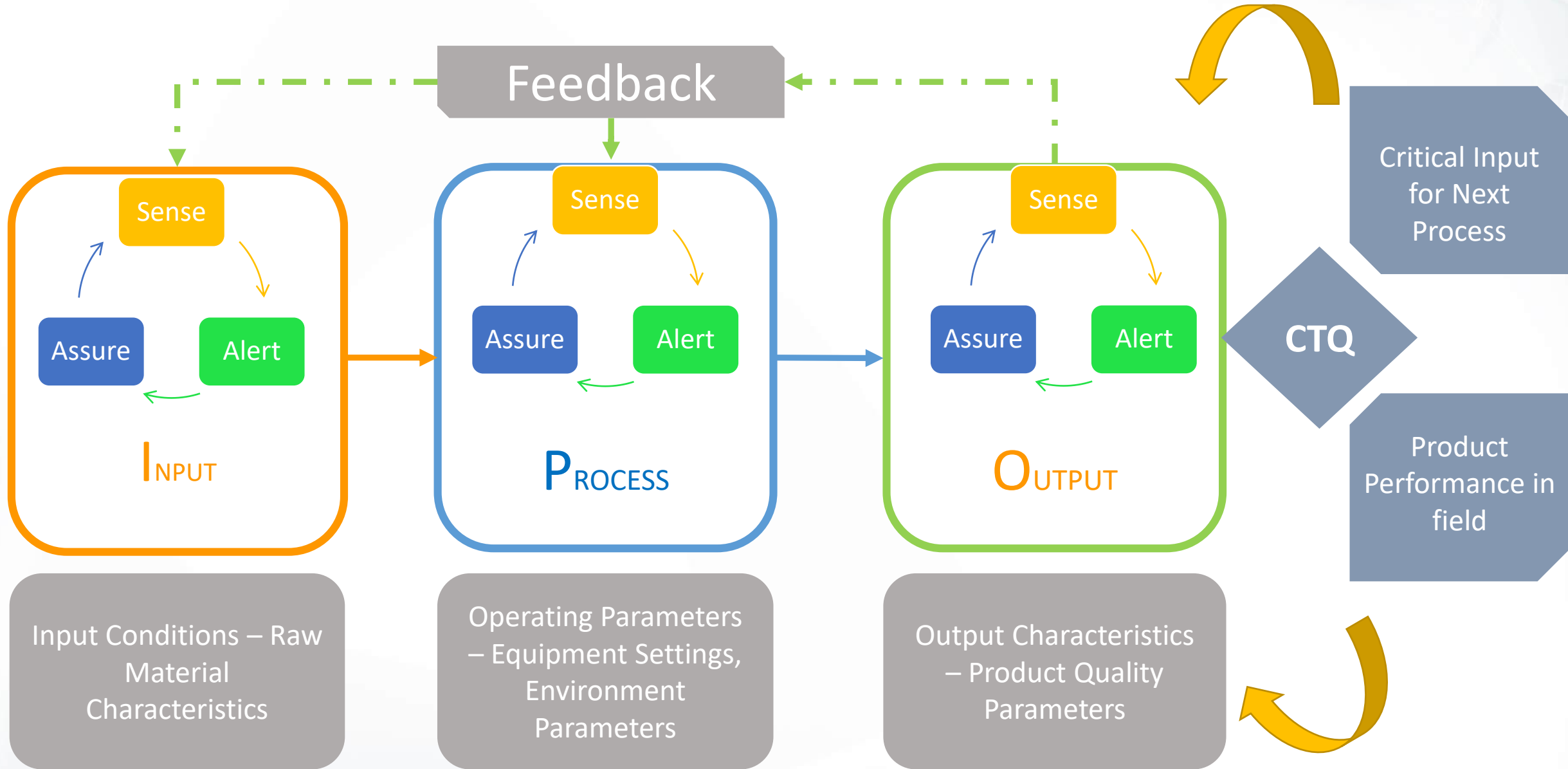


C4i4 Lab (Centre for
Industry 4.0 Lab)

IIoT is enabled in 4 discrete steps



The IPO Process Across the Manufacturing Value Chain



Altizon's Experience - IIoT Enabled Manufacturing Quality



**IoT and
DOE**

Altizon's Offerings



Datonis Edge

- Most advanced Edge gateway with secure ready connectors
- Most reliable with built in cache during unreliable connectivity
- Advanced analytics, ML and AI
- Supports multiple hardware and platforms



Datonis IIoT Platform

- Enterprise Ready Industrial IoT platform that's ready to scale
- Enterprise grade security
- Hybrid, Multitenant, Cloud Agnostic
- Advanced analytics, ML AI, and Business Intelligence
- Flexible deployment options – Cloud, On-Prem, Hybrid
- Developer Friendly



Datonis Manufacturing Intelligence

- Connect heterogeneous shopfloor systems with ready connectors
- 360 degree plant view and single source of truth for every stakeholder
- Measure and analyse KPIs using Business Intelligence
- Integrate Manufacturing Intelligence into your business applications

Learnings So Far

Learnings So Far !!!!



Business Alignment

- Blessings of top management
 - Business buy in to the projects is super critical
 - Typically business has the budget
 - Bias for action
- IT can play an important role of an enabler
 - Selection of partners and IT support
 - Integration with ERP / Planning / PLM / CRM systems
- Alignment to KPIs for different personas – Where to focus?
 - Production
 - Maintenance
 - Quality
 - Supply Chain
 - EHS

- Hardware readiness
 - Connectivity to legacy machines
 - Calibration of sensor data connected to the platform
 - Calibration of sensors themselves
 - Disparate control systems
- Network readiness
 - Wireless vs wired
- IT / OT readiness
 - PLC, SCADA, ERP, Planning, QMS, EMS
 - Purchasing contracts across supply chain for data sharing

- Partner ecosystem
 - Selection of right automation, integration partners – experience, agility, adaptable, speed, post go-live support
 - Project ownership

Organizational Change Management

- Organizational culture
 - Most important aspect of the IoT project
 - Fundamental paradigm shift from sampling statistics to handle big data and analytics
 - Handling of alerts and notifications
 - Capacity to handle the TRUTH on the shopfloor and take it in the right spirit
 - Believe and Trust in Black Box of Machine Learning algorithms – touch / sense based to believing in AI
 - Big data analytics starts as a FISHING EXPEDITION
 - Need to become an ENGINEER again

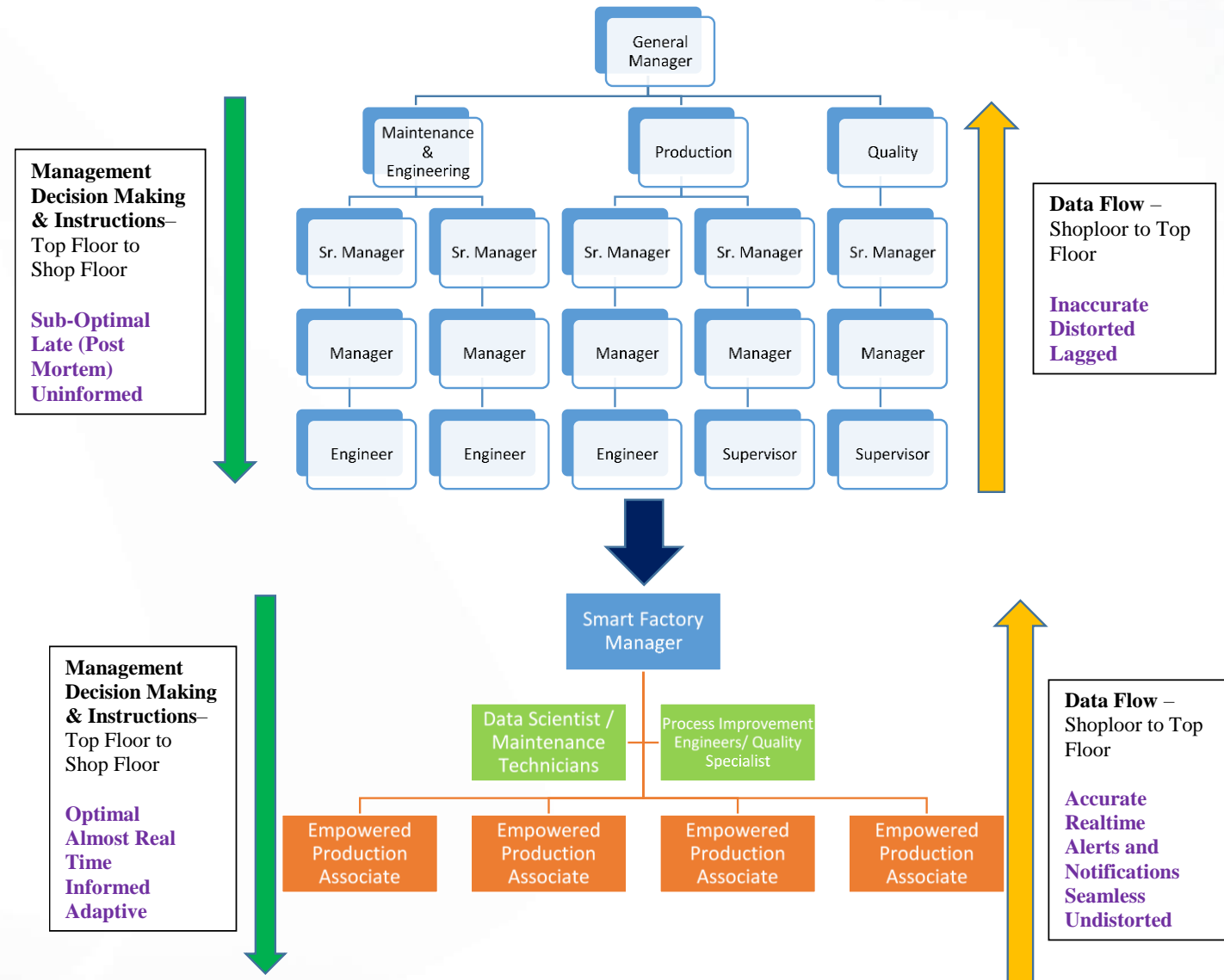
Future Organizations

Flat Organizations – With minimal supervisory and managerial **interference**

New Roles – Data Scientists, Super Specialized Process / Design / Engineers

Less of Management and More of Innovation and Engineering

Radically new dynamic Position and Job Descriptions **SANKHYACHARYA**



We need to make sure that this is not another LABEL on our shirt !!!



Process

- Growing respect for correlations rather than a continuing quest for elusive causality
- IoT enabled Six Sigma, TPM, TOC, Lean and Industrial Engineering – Turbo charge your continuous improvement initiatives
- Believing in Black Box of Machine Learning algorithms

The traditional process of scientific discovery—of a hypothesis that is tested against reality using a model of underlying causalities—is on its way out, replaced by statistical analysis of pure correlations that is devoid of theory -

Big Data - A revolution that will transform how we live, work and think By Victor Mayer-Schönberger & Kenneth Cukier

Fundamental Changes in Management Policies

- Need to re-think the budgeting and capital investment process
- Need to re-think the way we discuss / negotiate with unions
- Need to re-think the way we do performance measurement of Management staff – SLA based KPI's for indirect staff
- Need to re-think how we prepare and face ISO, TS, ES, Compliance audits, PFMEA, DFMEA
- Need to re-think the current existing organization structure – what is the future role of middle management?

What are Companies Exploring in Manufacturing?

- How can Management do IIoT enabled Operations Review?
- IIoT enabled ISO audit / TS16949 audit?
- IIoT enabled energy conservation?
- IIoT enabled management consulting?
- IIoT enabled MSA (Measurement & System Analysis)?
- How can IIoT help in identifying Floating bottlenecks?
- How can IIoT help in Accelerated VSM?
- How can IIoT help to dismantle most of the committees and focus on MANAGEMENT by EXCEPTION
- How can IIoT help to dramatically improve safety of the plant?
- How can IIoT helped significantly improve operator health?
- How IIoT can be used to prevent new capital investments? How can IIoT help in negotiating union agreements?
- How can IIoT help to reduce contact time losses, dramatic reduction of overtime / 3rd shift?

Q&A