

数字化转型下的精益升级

Lean Upgrading in Digital Era

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VP of Asia Supply Chain Management

Performance Materials and Technology

QR Code



宏观环境在飞快地发生剧烈变化 Drastic Disruptions At A Rapid Pace

政治挑战 Political Challenges



环境保护 Environment



人才战略 Talent



金融变革 Financial



商业大环境的大趋势: 中国企业的变化

Chinese Corporate Is Changing

老模式 Conventional Model

-  急速的规模化扩张和重复投资
Rapid scale expansion and repetitive investment
-  利润薄, 盈利能力较差
Low margin and poor profitability
-  合规压力和成本较小: 环保等
Less compliance pressure and cost: env. protection, etc.
-  市场竞争相对宽松
Relatively loose mkt competition

商业环境变化 Biz Env. changing

- 严厉的环保政策
Env.
- 市场开放程度增加
Open mkt
- 融资难度增加
Financing
- 人口红利变弱
Labor population
- 税收制度更加完善
Taxation

新模式 New Model

- 削减过剩产能, 收紧投资
Cut excess capacity and tighten investment
- 开始重视创新和企业盈利能力建设
Focus on Innovation & profitability building
- 合规成本增加: 环保投资、税收等
Increased compliance costs: environmental investment, taxation, etc.
- 市场竞争激烈: 本土和跨国公司
Intense mkt competition: local & MNC

宏观市场 vs. 中国企业希望达成的目标

Macro Mkt vs. The Target of Chinese Company

企业希望达成的目标

Target of Chinese Corporate

- 如何达成**利润良好的增长**
Achieve profitable growth
- 如何实现**数字化转型**
Digital Transformation
- 如何成功实施全球化战略
Global Strategy
- 企业需要怎样的核心能力
Core Competitiveness

The Challenge of Chinese Corporate

市场大环境的现实情况

The Reality of Mkt Env.

- 市场竞争加剧对企业盈利能力要求提升
Request of profitability increase
- 数字化技术引领新一代革命
Digital revolution
- 全球化程度的加深带来更多机遇和挑战
Globalization brings challenges & oppty.
- 市场经济使得企业优胜劣汰更加残酷
Market-oriented economy

精益理念已经超越了生产制造的范畴

Lean concept has expanded beyond production



精益无处不在 Lean Is Everywhere



研发 R&D



创新 Innovation



财务 Finance



营销 Mktg



客户体验 UX



生产 Mfg.



人力 HR

LEAN



酒店 Hotel



航空 Aero



医院 Hospital



制药 Pharma



化工 Chemical



餐饮 Restaurant



建筑 Construction

工业物联网时代为精益生产注入新的活力，互补提升

IIoT Gives Lean Production Vitality, They Are Complementary

精益生产

- ✓ 消除浪费、快速交付
- ✓ 识别&消除非增值环节
- ✓ 多品种、小批量
- ✗ 缺乏“信息化”、“网络化”和“自动化”
- ✗ 生产环节连接不畅，数据采集不全，流转不透明

Lean mgmt. provides operational base for mfg. digital transformation

IIoT tech helps lean mgmt. land in company

工业物联网IIoT技术

- ✓ 精益思想与IIoT不存在矛盾
- ✓ 价值流数据化，智能算法，智慧解决方案
- ✓ 以数据为核心，串联所有生产环节和流程
- ✗ 一味增加智能硬件设备，忽略了内部增效和精益管理
- ✗ 没有精益基础的智能化容易造成“信息孤岛”和无效投资

数字化升级后的精益管理为企业生产带来更大效益

Digital Lean Achieves More Benefits For Mfg. Corporate

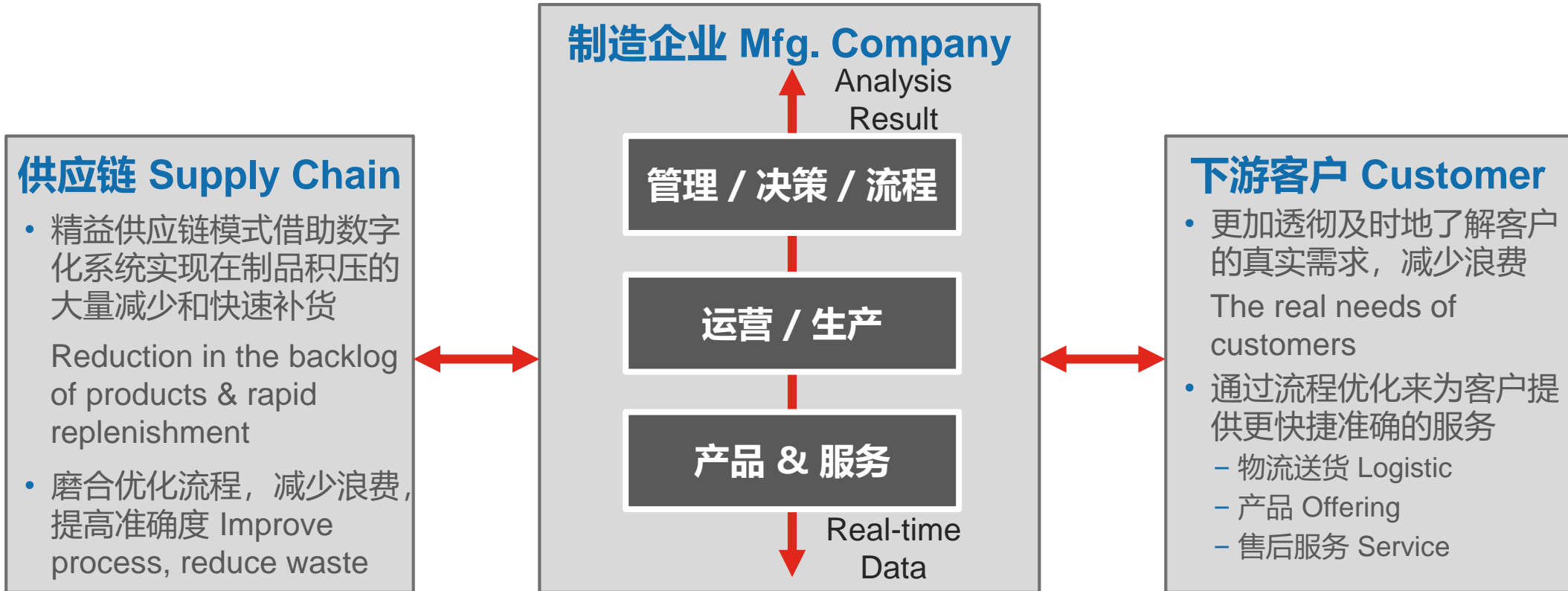


- 智能制造与精益优化融合后能产生更大的效益：20%(单独应用) → 40% (融合应用)
- 大数据与先进分析技术为精益工具提供了更准确透明的数据
Big data & adv. Analysis provide accurate & transparent data
- 精益管理与数字化技术结合的使用场景 Using Scenarios
 - 生产转换 Mfg. switch
 - 停工预测 Shut-down prediction
 - 实时数据 Real-time data
 - 质量监测 Quality monitoring
 - 安全改善 Safety improvement

来源：BCG Analysis

数字化精益还可以串联产业链，提升上下游整体表现

Digital Lean Integrates Industrial Chain, Improve Performance



Quality
Performance ▲

High Level
Performance ▲

Business
Performance ▲

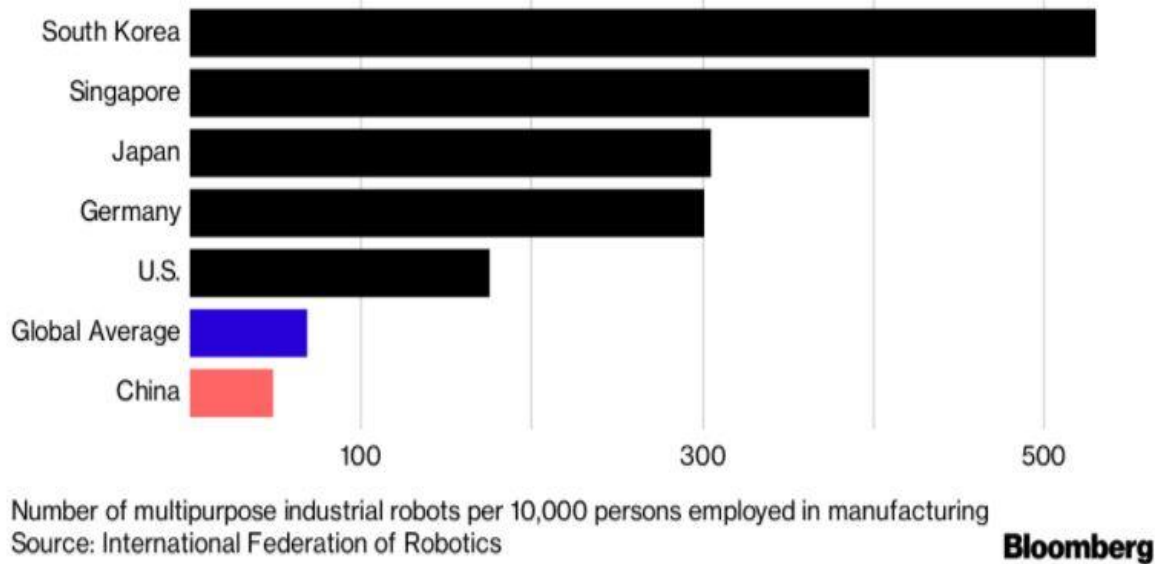
中国正在自动化程度上快速追赶发达国家

China is catching up in automation

中国的自动化程度仍然大幅度落后于发达工业国家
China's automation is far behind industrialized countries...

China Robot Density Lags

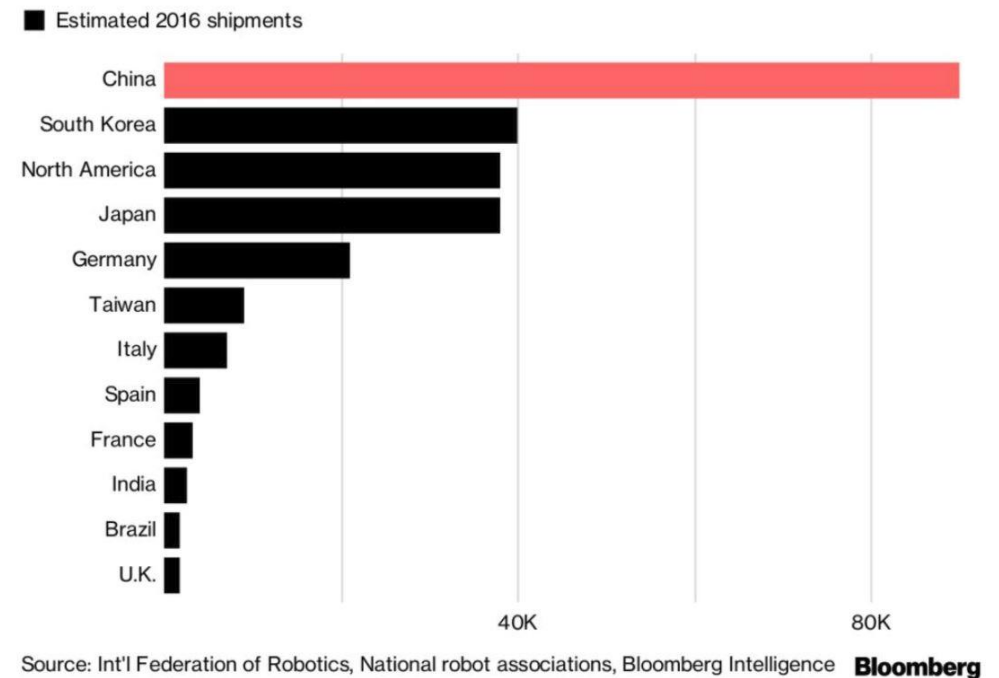
Automation level remains low relative to other major economies on a per-worker basis



但中国正在快速追赶
...but is catching up rapidly

Robot Rise

Installations in China are growing fast, and make up about a third of the global total



日本企业具有深厚的精益管理基础，以“人”代代相传

Passing To Next Generation By Employees: Lean Mgmt In JP



Mr. Yamada

Group Manager
18yr Working experience

Professional Experience



Toyota Motor Corporation
4 years



Group Manager
2016-Present, 3 years
Project Manager
2015-2016, 1 year



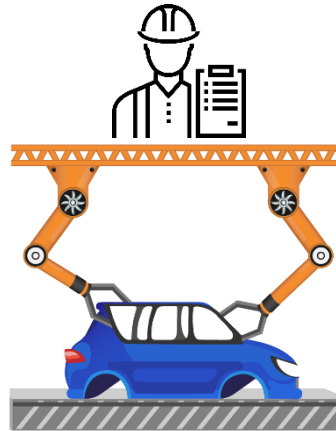
Senior Executive Coordinator
Toyota Motor Corporation Australis
2012-2016, 4 years



Plant Assistant Manager
Toyota
2008-2011, 3 years



Toyota
7 years
R&D Assistant Manager
2003-2006, 3 years
Production Engineering Specialist
1998-2002, 4 year



人才从生产线输送到各个职能部门，精益思想也随之在企业内传播、积累、进化



Years of working experiences in the plant

然而中国企业的管理文化非常不同

Looking at management culture in China

中国企业扩张快速，但管理基础薄弱

Expand rapidly, weak mgmt. base

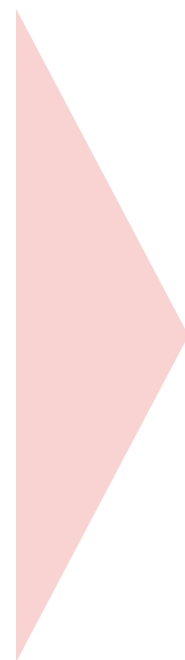
- 经济高速发展，爆发性的增长机会
High growth economy
- 注重扩张，牺牲盈利，负债率较高
Focus on scale expanding, weak margin
- 工人的教育程度较低，技能培训欠佳
Lack of well-educated & skilled workers
- 人员流动率较高
High turnover rate
- 精益理论基础薄弱，缺乏精益管理实践体系
Weak lean mgmt. base and practical system
- 人员没有形成良好的精益行为习惯
Lack of lean behavior



如何解决

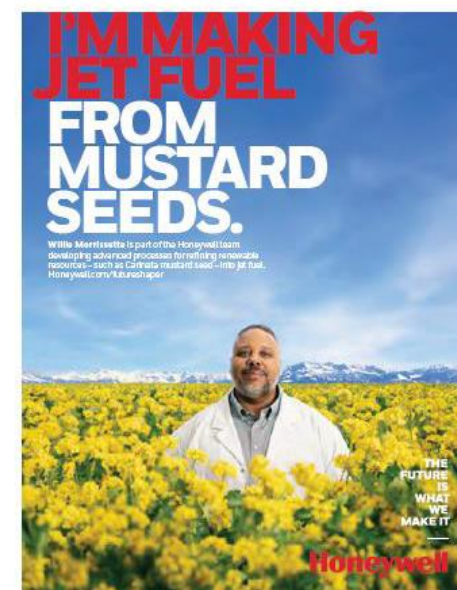
How to solve

- 在公司内树立**精益文化**，鼓励全员参与，渗透到各个职能
Build up **lean culture**, encourage all employees join in
- **数字化系统**辅助精益落地和持续使用
Digital system help lean mgmt. land and be sustainably used
- 智能制造**设备升级**，完善各级**数据**，支持精益应用
Smart mfg. **equipment upgrade**, improve **data quality**



霍尼韦尔的 Honeywell's Experience

'THE FUTURE IS WHAT WE MAKE IT'



2000年以来霍尼韦尔经历了巨大的转变

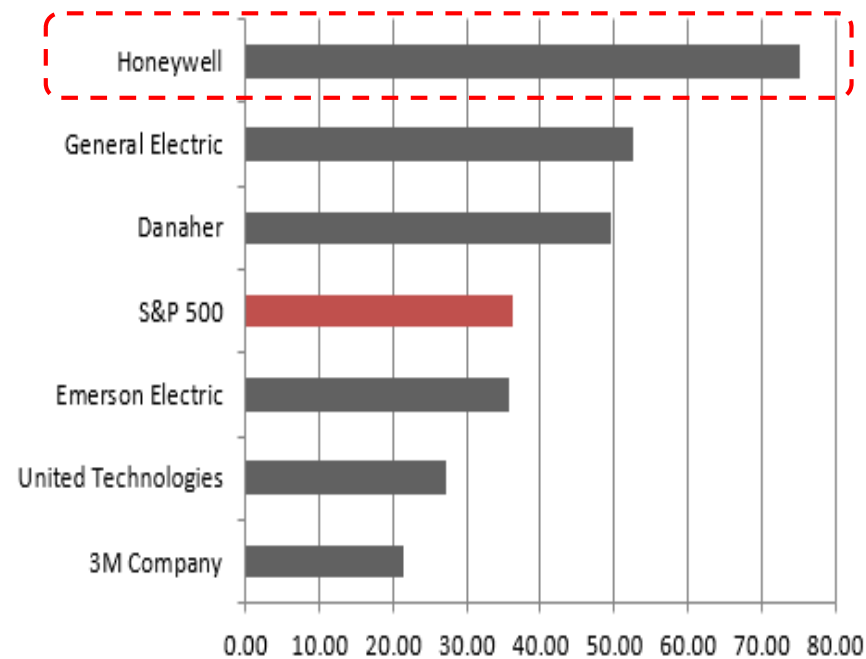
Huge Turnaround and Transformation Since 2000

销售收入与公司市值 Revenue & Market Cap

销售收入 (\$Bn)	2001	2018
Honeywell	23.7	42.3
	125.9	124.0
SIEMENS	77.4	95.3
市值 (\$Bn)	2001	2019 年4月
Honeywell	50.0	124.7
	480.0	81.2
SIEMENS	75.8	94.2

从2008经济危机中恢复 Recovering From 2008 Crisis

3yr Stock Returns,
ending Dec 31, 2012



Source: FactSet, 2014

霍尼韦尔的今天 Today

STILL GROWING STRONG

- \$14B cash
- Strong market cap
- Pension funded
- Sustainability & environmental obligations

关键的转变

Key Transformations

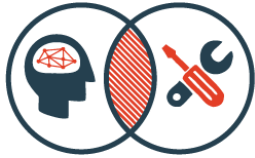
KEY TRANSFORMATIONS

KEY FOCUS



改善运营 Fixing Operations

- Six Sigma, Honeywell Operating System (HOS)
- R&D process



Strategy & Marketing

- Hire “real” strategists and marketers
- From “technology forward” to “market back”



Portfolio Management

- “Great Positions in Good Industries”
- 80+ acquisitions. 40+ divestitures



High Growth Regions (HGR)

- >50% of global revenue growth
- China as the centerpiece

精益在霍尼韦尔 - HOS金牌运营

Lean Mgmt. in Honeywell – Honeywell Operation System

增长 Growth

- Common Set of Tools / Metrics to Drive and Manage Sales
- Value Proposition Development Rigor
- Breakthroughs – New Adjacencies to Enhance Growth Rate
- Channel Program Design

创新 Innovation

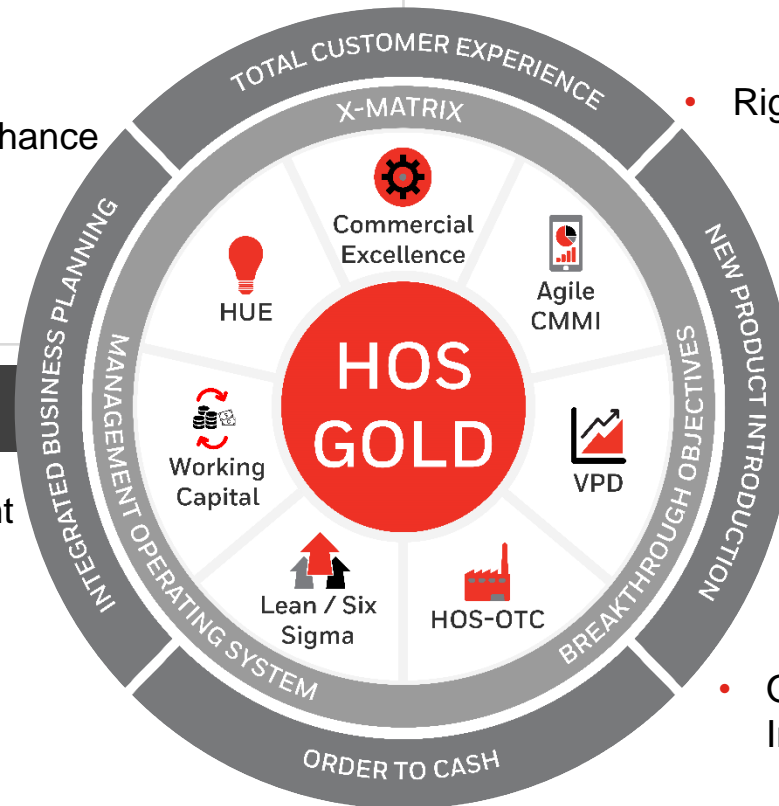
- ~11K Employees Developing Software; World-Class Technologists Driving Innovation
- Rigor and Metrics for New Product Development
- Honeywell User Experience Incorporated Into Everything We Do

手段 Leverage

- Cross-Business Technology Development
- Cross-Business Selling

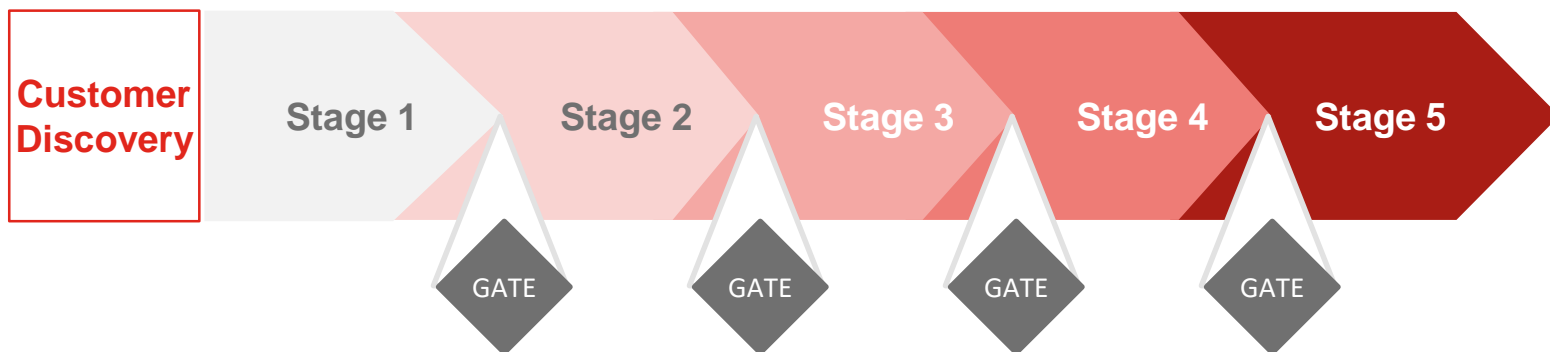
生产力 Productivity

- HOS Drove >200 bps Margin Expansion Over Last 3 Years
- OEF Management Drove ~80 bps Fixed-Cost Improvement Over the Last 5 Years

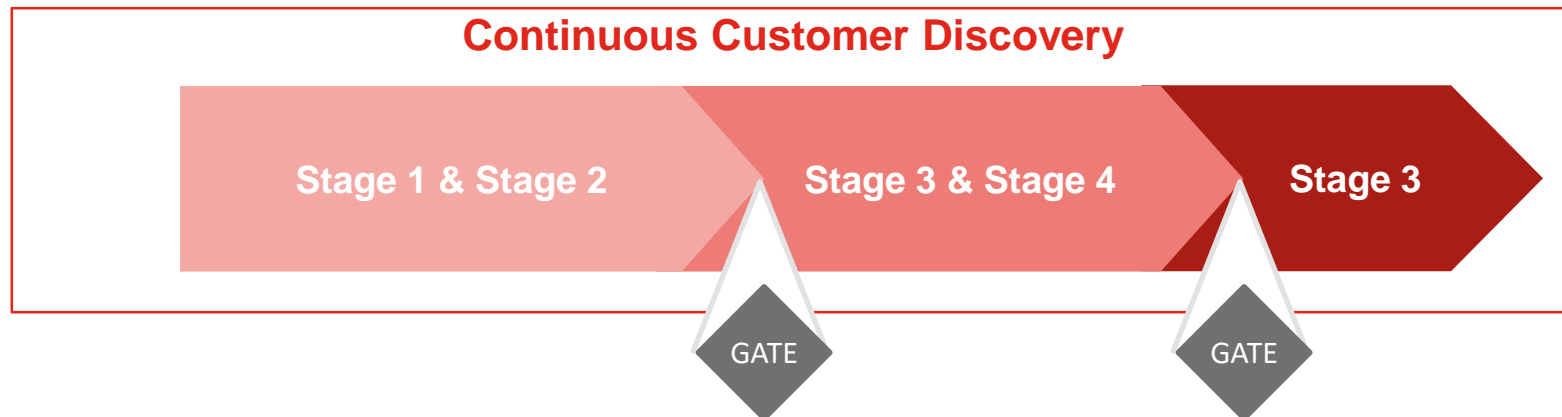


精益在霍尼韦尔 – 敏捷开发

Lean Mgmt. in Honeywell – Agile Development



流程升级 Upgrade



50%
缩短开发时间
Reduce Cycle time



持续发现客户需求
Continuous customer discovery



提早接触客户
Early customer validation



简化决策流程
Simplified decision process

霍尼韦尔金牌运营数字化 Digital HOS

数字化金牌运营的优点 Benefits

- 将流程和方法论**软件化**

Software

- 增加用户的**粘性**

Retention

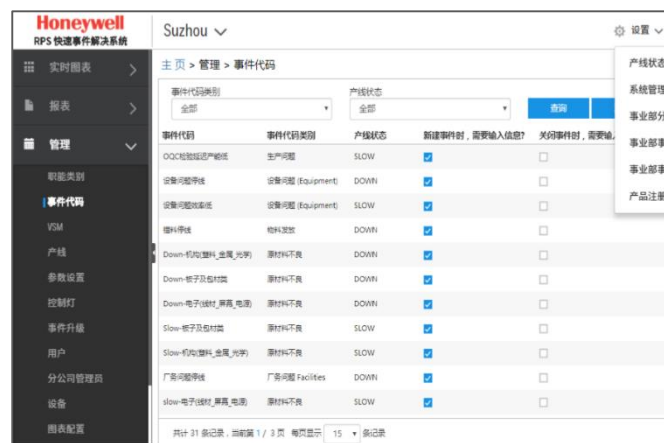
- 推动**持续**追踪和改进

Continuous track & improve

- 搜集并整合运营**数据**,
为智能**分析**提供基础

Data and smart analysis

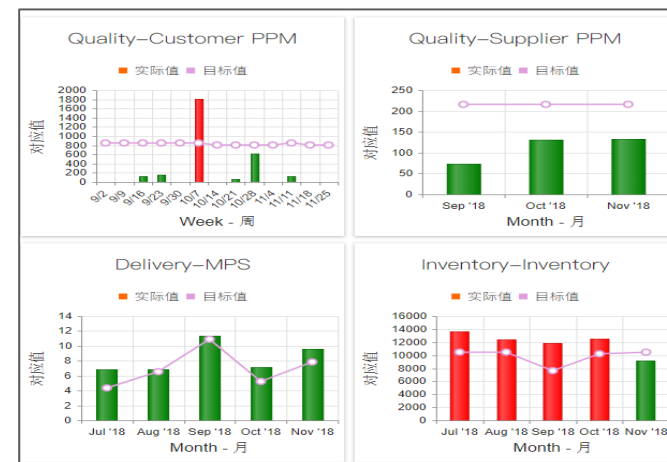
霍尼韦尔RPS系统



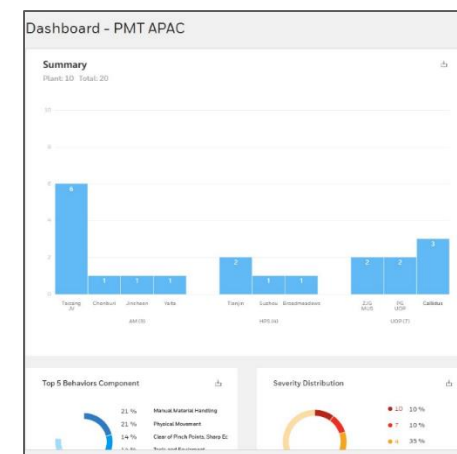
霍尼韦尔CKS互联改善系统



霍尼韦尔CTM互联层级会议



霍尼韦尔EAGLE安环管理系统



数字化转型是精益管理在中国企业落地的关键机遇

Digital transformation breathes new life into lean for Chinese enterprises

QR Code

