

Changing Culture



Rolls-Royce

Indianapolis Defense Manufacturing & Assembly

Rolls-Royce in Indiana



- **Celebrated our Centennial last year**
 - 100 years in Indiana; 20 years as Rolls-Royce
- **Announced nearly \$600 million to modernize manufacturing operations and conduct technology research**
- **4,000 employees in Indiana**
 - 1,200 engineers, 1,050 UAW employees
- **In 2012, 2,000 people moved to downtown Indy into a modern, “agile” office building – a \$30 million investment**
- **Located across 12 Central Indiana locations**



Indianapolis Transformed

Our journey



the beginning of our journey
low productivity,
poor delivery,
low morale,
lack of unity



identified
challenges
and created
**vision of
success**



**shared business
challenge and
vision**
through UAW
negotiations,
1:1 meetings,
30MMM, etc.



**began making
things
happen/
culture shift**
People
Operations
Infrastructure



culture: people
recognition and
engagement via
PRIDE, Empl.
Engagement
Program, mentorship,
transparent
communications



processes: operations
HPC, Production
System, Project
Condor feedback
sessions



**infrastructure:
facilities**
Project Daniel
Project Condor



trending in positive
direction
**SQDCP
Engagement**



**securing our
future, together**
improved productivity,
competitiveness,
engagement,
leadership and
accountability



Game Changers

2015

- ❑ Linking HPC to the production system
- ❑ Subject Matter Experts
- ❑ IndyCar theme: Green and checkered flag internal branding for winning

2016

- ❑ Introduction of servant leadership approach
- ❑ The introduction of Race 2
- ❑ Hourly team members becoming coaches for POV and support

PRODUCTION SYSTEM:
7 LEAN PRINCIPLES & 20 MINIMUM STANDARDS



Production System

Celebrating success – Race Theme



Current race standings

- 32 teams launched
- 18 at green flag
- 10 at checkered flag

DID WE WIN TODAY?



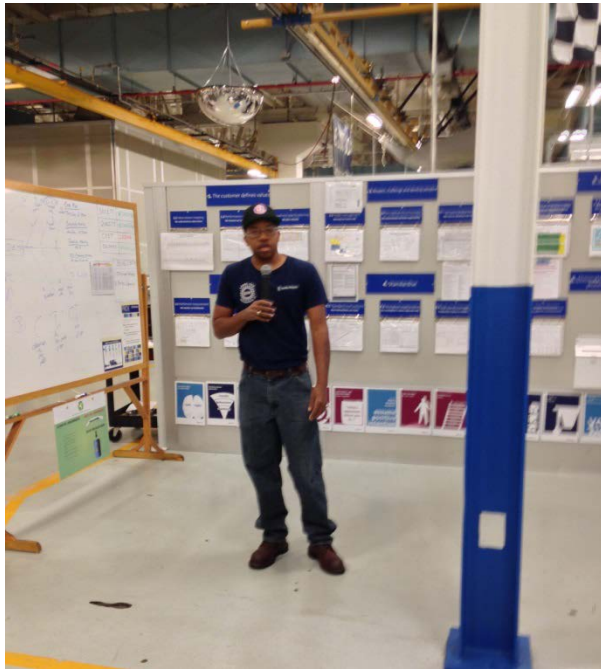
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On the Winning Path Production System 2015 - 2016

<p>S</p>	<ul style="list-style-type: none"> • Safety <ul style="list-style-type: none"> • 1500+ Find-it Fix-it Proactive Reports Submitted - 2016 • Over 20% increase in monthly HS&E compliance items
<p>Q</p>	<ul style="list-style-type: none"> • RFT Implemented <ul style="list-style-type: none"> • 92% to 98% (AEP Coatings) • 70% to 98% (AE 3007 Turbine Wheels) • Daily Quality Discussions <ul style="list-style-type: none"> • Driving behaviors to reduce CoNQ
<p>C</p>	<ul style="list-style-type: none"> • Efficiency Gains <ul style="list-style-type: none"> • Lead Time Reductions (Tie Bolts/Shafts) • Build Efficiency 15% over Standard (LiftFan) • Re-grind vs New Tooling <ul style="list-style-type: none"> • Understand impact of tool sharpening
<p>D</p>	<ul style="list-style-type: none"> • Arrears Reduction <ul style="list-style-type: none"> • Zero Arrears in 2016 (AE Compressor Wheels) • Increased Throughput <ul style="list-style-type: none"> • 70% increase in Delivery (AE Compressor Wheels)
<p>P</p>	<ul style="list-style-type: none"> • High Performance Culture <ul style="list-style-type: none"> • 34 Operational Cells Completed • Champions amongst the teams • New Way of Life – Start of Shifts • Stop-Fix Events (Kaizen) <ul style="list-style-type: none"> • 32 Completed Events • 1000+ Identified Actions Closed



Visual Metrics: Team and Plant level



Visual Management and meeting centers on shop floor

RACE 1 DRIVE TO ENGAGE AND TRUST

	Launch	Green Flag	Checkered Flag
1523 / The Bolts & Screws	🚗	🟢	🏁
1528 / RC Fan Wheels	🚗	🟢	🏁
4555 / RC LP Turbine Wheels			
4555 / RC Diffusers	🚗	🟢	🏁
4571 / RC Compression Wheels			
4594 / CSB	🚗	🟢	
0505 / T-56 Turbine Wheels			
0506 / RC HP Turbine Wheels			
0551 / Inboard Diffusers			
0577 / Prop Screws	🚗	🟢	🏁
0583 & 0589 / Halo Turbine Wheels / Impellers	🚗	🟢	
1554 & 3558 / Halo Blades / Cases / Nozzles	🚗		
3555 & 3577 / Backs / T-56 Blades	🚗		
3558 & 3588 / RC Blades / Inspection			
0554 / T-56 Vane Segments			
0559 / RC Vane Rings	🚗	🟢	
0560 / Turbine Vanes			
0581 / RFP Control			
0823 / Single Crested Operations			
3547 / Heat Treat & Special Processes			
4582 / Small Engine Assembly Line			
0580 / RC Assembly Floor Line			
0582 / T-56 / Industrial Assembly	🚗		
4558 / LPT Fan			
4558 / LPT Wheels			
3594 / RC Sub-Assemblies			
3588 & 4588 / Plant 5 Test			
4578 & 4588 & 3552 / Compression Bore Stoves			
0542 / Curran Gains			
0535 / (M) T1 Rotatives			
0536 / (M) T1 Turbines / Assemblies			
0535 / GP / Facilities			
0535 / Ops Support			
0547 / Stores			
0841 / Tool Room / Precision Wheels			
0583 / CMM			
0531 / Gauge Inspection			
0535 / Instrument Repair			

RACE 2 DRIVE FOR COMPETITIVE EDGE

	Onliner	Lean Focus	System
1523 / The Bolts & Screws	👉	🟢	🏁
1528 / RC Fan Wheels	👉	🟢	🏁
4555 / RC LP Turbine Wheels			
4555 / RC Diffusers	👉	🟢	🏁
4571 / RC Compression Wheels	👉		🏁
4594 / CSB	👉	🟢	
0505 / T-56 Turbine Wheels	👉	🟢	
0506 / RC HP Turbine Wheels			
0551 / Inboard Diffusers	👉	🟢	
0577 / Prop Screws			
0583 & 0589 / Halo Turbine Wheels / Impellers	👉	🟢	
1554 & 3558 / Halo Blades / Cases / Nozzles			
3555 & 3577 / Backs / T-56 Blades	👉	🟢	
3558 & 3588 / RC Blades / Inspection	👉	🟢	🏁
0554 / T-56 Vane Segments	👉		
0559 / RC Vane Rings			
0560 / Turbine Vanes			
0581 / RFP Control	👉	🟢	
0823 / Single Crested Operations	👉		
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Operations wins tracking



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Trusted to deliver excellence