



GO BEYOND

CREATING A RESILIENT SUSTAINABILITY STRATEGY + LESSONS FROM COVID-19

THE PRATT & WHITNEY STORY

AUGUST 27, 2020





Net Sales \$26B*



Net Sales \$21B*



Net Sales \$15B**



Net Sales \$16B**



RTX is 195,000 Employees Strong, Four Major Business Units, \$74B** Sales



P&W Excels at All Types of Gas Turbine Engine Propulsion

GTF ENGINE FAMILY

FOR LARGE COMMERCIAL AIRCRAFT
AND REGIONAL JETS

17,000 – 33,000
Pounds Thrust Class

16%

Improvement in
fuel efficiency

50%

Reduction in
regulated NOx
emissions

75%

Reduction in
noise footprint

GTF Technology Provides Major Benefits

>300 GTF-Powered Aircraft in service

304,419,465 Gallons of Fuel Saved

2,922,431 Metric Tonnes CO₂ Avoided

(As of 2MAR2020) <https://pwgtf.com/benefits/>

ENVIRONMENT & SUSTAINABILITY

BECOMING THE BEST AEROSPACE COMPANY FOR THE WORLD

2020 SUSTAINABILITY GOALS

MOVING THE WORLD FORWARD



¹ Improvement versus 2010 baseline (Oxy and service goals). ² Further reduce L1E exposure to 50% below OEL. No current OEL L1E exposure above OEL. See also: [www.pw.com](#)

³ Global case studies providing implementation controls to prevent the same injury from occurring again.

ENVIRONMENT, HEALTH & SAFETY COMPLIANCE GOALS

0 ENFORCEMENT ACTIONS, NON-COMPLIANCE

100% INSPECTIONS WITHOUT ENFORCEMENT ACTIONS

100% ANNUAL PERMIT & PROGRAM EVALUATIONS

100% PASSING COMPLIANCE/ ASSURANCE SCORES



Since 2006, Pratt & Whitney has tripled production while ...

Reducing total Greenhouse Gas emissions equivalent to

518,000
Passenger vehicles driven for one year

Reducing total water usage equivalent to

481,000
Individuals' water needs met for one year

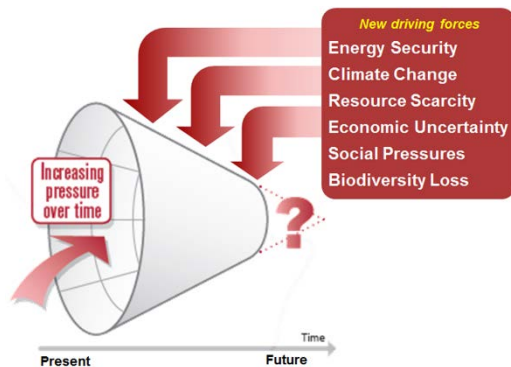
Increasing total waste recycling rate by

+ 53%
Waste Recycling

OUR SITUATION

Sustainability is a recognized global business issue...

...and an aviation industry imperative



Sustainability:
A driver for innovation & value

AVIATION AND THE SUSTAINABLE DEVELOPMENT GOALS

Direct relevance to global aviation		
	1. NO POVERTY	End poverty in all its forms everywhere
	2. ZERO HUNGER	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
	3. GOOD HEALTH AND WELL-BEING	Ensure healthy lives and promote well-being for all at all ages
	4. QUALITY EDUCATION	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
	5. GENDER EQUALITY	Achieve gender equality and empower all women and girls
	6. CLEAN WATER AND SANITATION	Ensure availability and sustainable management of water and sanitation for all
	7. AFFORDABLE AND CLEAN ENERGY	Ensure access to affordable, reliable, sustainable and modern energy for all
	8. DECENT WORK AND ECONOMIC GROWTH	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	9. INDUSTRY, INNOVATION AND INFRASTRUCTURE	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
	10. REDUCED INEQUALITIES	Reduce inequality within and among countries
	11. SUSTAINABLE CITIES AND COMMUNITIES	Make cities and human settlements inclusive, safe, resilient and sustainable
	12. RESPONSIBLE CONSUMPTION AND PRODUCTION	Ensure sustainable consumption and production patterns
	13. CLIMATE ACTION	Take urgent action to combat climate change and its impacts
	14. LIFE BELOW WATER	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
	15. LIFE ON LAND	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
	16. PEACE, JUSTICE AND STRONG INSTITUTIONS	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
	17. PARTNERSHIPS FOR THE GOALS	Strengthen the means of implementation and revitalize the global partnership for sustainable development



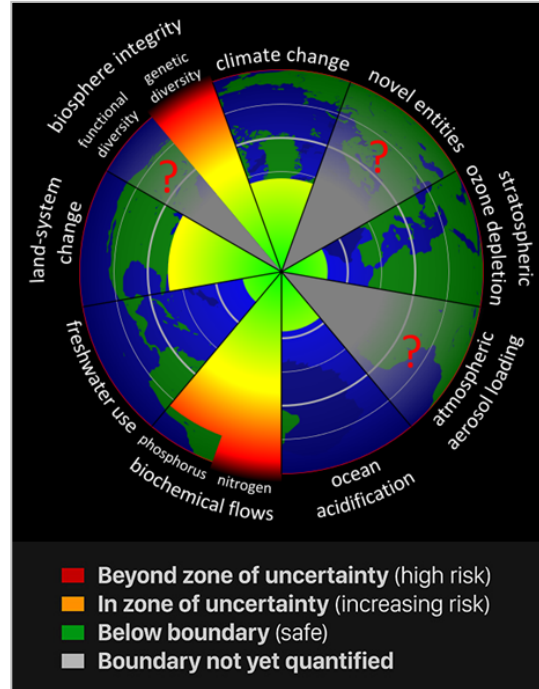
BUSINESS SUSTAINABILITY – REFRESHING THE ‘WHY’

People



A higher purpose for all

Planet



Respecting planetary boundaries

Ninjatacoshell (https://commons.wikimedia.org/wiki/File:Planetary_Boundaries_2015.svg),
<https://creativecommons.org/licenses/by-sa/4.0/legalcode>

Profit



Sustainability drives profit

CUSTOMERS, FINANCIAL, CULTURE



Unprecedented public awareness and support for sustainability
Sustainability is becoming the language of our customers and industry
Sustainability adds depth to our relationships & exposes new revenues

**‘Halo effect’ around
our product and
service portfolio driven
by sustainability
informed innovation**



Shareholder value: The future of investing is sustainable
Comprehensive and informed decision making for the long-term
Expose hidden costs to deliver maximum efficiency & value

**Our assets &
operations are
efficiency
benchmarks beyond
our industry**



Sustainability is a strong engagement lever of ‘purpose’
Our workforce is changing, and want a sustainability agenda
Develop Leaders to drive products and service differentiation

**P&WC is THE
company that
everyone hopes to
work for – or work
with**

...Sustainability brings value to ALL Business Units

DEVELOPING A VISION AND EXECUTING

A DECADE OF CHANGE 2009-2019



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A DECADE OF CHANGE 2009-2019

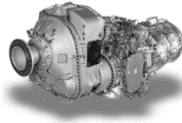


The message was clear, we must make difficult decisions today for those who will inherit this world



DEVELOPING A VISION AND EXECUTING

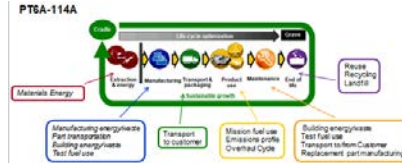
A DECADE OF CHANGE 2009-2019



People
Planet
Power



People. Planet. Power.™



Pratt & Whitney Canada
A United Technologies Company
ADDRESSING CHALLENGES



SUSTAINABILITY IS
EVERYTHING
IS SUSTAINABILITY

	Factory (Year 2018/2019)	Suppliers	Product
Waste	Pratt & Whitney Canada 100% waste recycled	Pratt & Whitney Canada 100% waste recycled at source	100% waste on site recycled at source
Energy	Pratt & Whitney Canada 100% waste on site recycled at source	Pratt & Whitney Canada 100% waste on site recycled at source	100% waste on site recycled at source
Water	Pratt & Whitney Canada 100% waste on site recycled at source	Pratt & Whitney Canada 100% waste on site recycled at source	100% waste on site recycled at source
Safety & Wellbeing	Pratt & Whitney Canada 100% waste on site recycled at source	Pratt & Whitney Canada 100% waste on site recycled at source	100% waste on site recycled at source
Materials	100% waste on site recycled at source		

Influence

All dimensions of sustainability embedded in everything we do

We influence stakeholders to move proactively toward sustainability

We contribute to establishing a responsible environment for our employees and communities around the world

The best aerospace company FOR the world

Emissions

TBC, less (2011 base) fleet combustion emissions

72% less (2011 base) engine oil consumption

10 dB reduction in perceived noise

Alternative energy All products ready

Products

Life cycle budget: part of design, manufacture & service

Material Stewardship 100% waste on site recycled at source

Altmarket: recycled, recycled materials, sustainable

Zero Waste

In our Operations

Carbon Neutral

In our Business activities

OWNING OUR FUTURE: P&WC SUSTAINABILITY

OUR VISION



FOR OUR PRODUCTS

Emissions

Reduce the environmental impacts of our products

Work with our customers to reduce in-service impacts

Sustainable Products

Design, manufacture and service products to minimize impacts

Use Ecodesign to drive product innovation

BETTER PRODUCTS

FOR OUR SITES

Zero Waste

> 95% recycling rate

Increase efficiency and reduce “non-product” output

Carbon Neutral

Use only sustainable energy sources

Lower our footprint to avoid future impacts and costs

BETTER SITES

FOR OUR PEOPLE

Influence

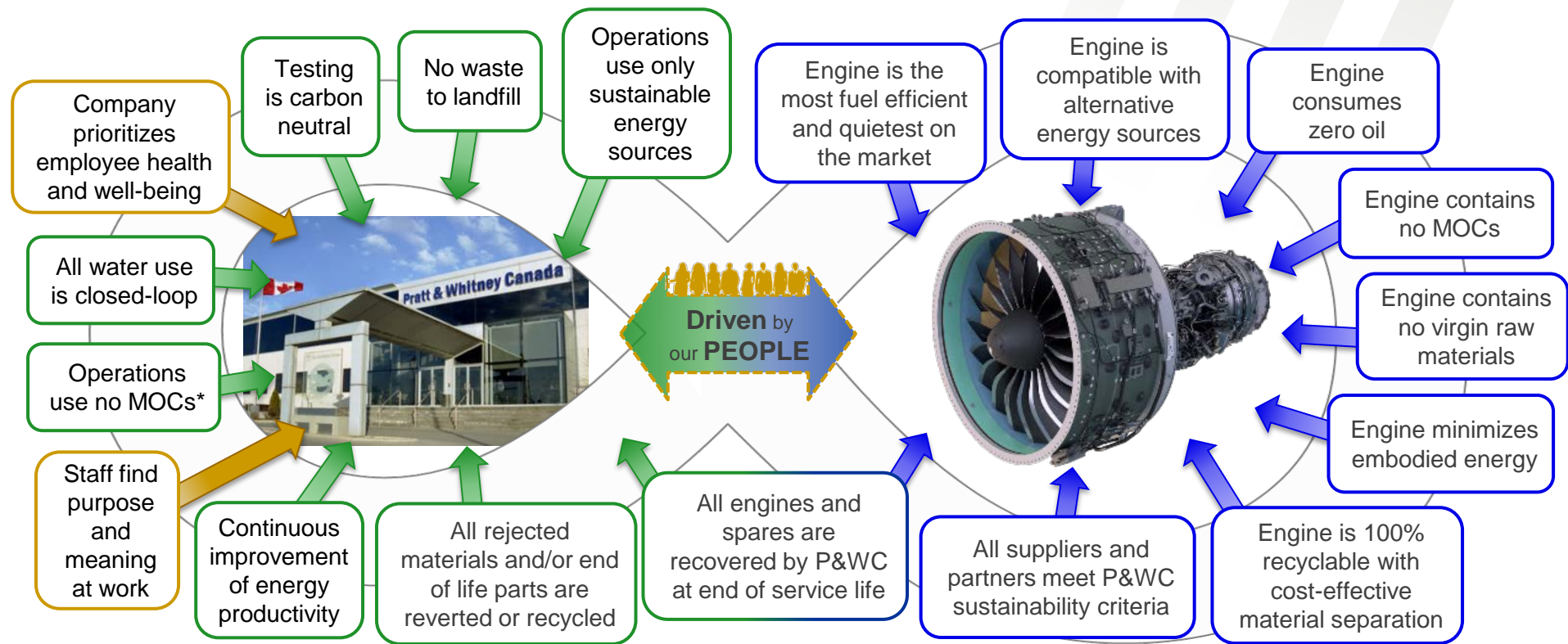
Be a force for positive change

Support and engage employees and communities in building a better future

WORKING BETTER

IDEAL SUSTAINABLE **FACTORY** & **ENGINE**

Our ideal
future state



Our business is a value delivery system – value that arises from our people

EVOLUTION OF A VISION: P&W 'MUST DOs'

SUSTAINABILITY



Reduce lifecycle
impacts of our
**products and
services footprint**



Minimize
our
**environmental
footprint**



Enrich the lives of our
employees and our
**global
community**



GO BEYOND

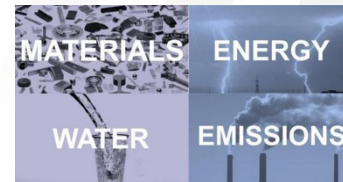
Becoming the **Best** 
Aerospace Company
 **FOR**  the World

We are transforming our operations, products and services to drive long-term business value through shared purpose, innovative approaches and reduced environmental impact in every community where we live and work

OUR SUSTAINABILITY TOOLBOX

BUILDING NEW COMPETENCIES TO SET US APART

- 1 **Lean & Green** Leveraging Kaizen events to reduce our environmental footprint
- 2 **Sustainability Value Assessment** Costing tool anticipates financial impacts of waste, water and energy prior to capital expenditures
- 3 **BMPs** Proven Best Management Practices (BMPs) allow ease of replication to reduce site impacts
- 4 **Sustainability Focals** Creating Our 'workforce of the future' to incorporate sustainability into all processes and functions
- 5 **Supplier Sustainability** Managing supply risk and enhancing brand reputation
- 6 **Ecodesign** Addressing lifecycle impacts of Products and Services



Water	GHG	Waste
Water balance Leak management Process wastewater Eliminate once-through cooling Cooling tower management Flow meters Low flow fixtures Rinse tank overflow Xeriscaping Recycle process wastewater Rain water harvesting	Energy Audit Site energy team Shut It Off Program Lighting Compressed air HVAC Boilers Building envelope Process energy Utility Review Fleet management	Site Waste reduction team Waste process mapping Waste containers Metals recycling Other commodities Waste determinations Waste water Coolants Acids/Alkalis Unique wastes



P&W COVID-19 RESPONSE

& LEVERAGING LESSONS TO SUPPORT SUSTAINABILITY

Health & Safety of all: Priority #1

Covid is/has been a unique **Opportunity**

Agility & **Persistence** are key

Collaborate with sites, business units and functions in 'new normal'

Balance near-term pressures with longer-term vision

Opportunity to build: **New Competencies** in Sustainability

Shift	tracking → enabling
Share	internal webinars on shared/best practices
Influence	company wide e-learning
Expand	sustainability focals network

Taking all that we have learned – at work and at home..

our Work**force** of the future looks like ?

our Work**place** of the future looks like ?



Exploring all options

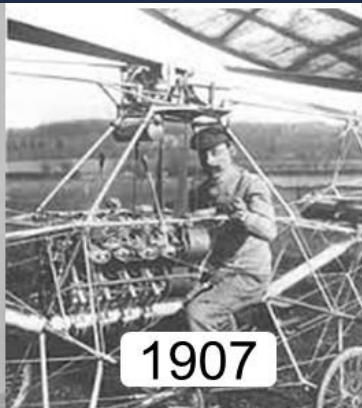
- ✓ Case Monitoring
- ✓ Contact Tracing
- ✓ Self-Assessments
- ✓ Thermometers
- ✓ Thermal Scanning
- Wearable Tech
- Testing
- + Ongoing



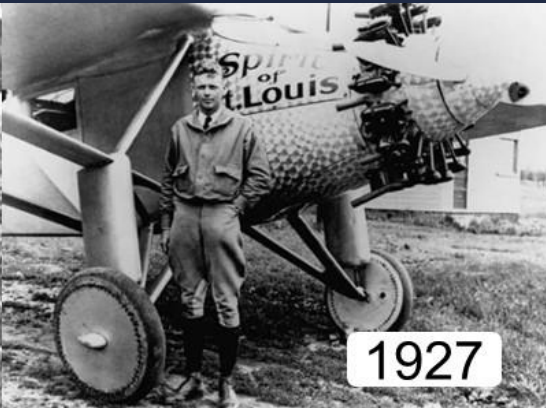
What often seemed impossible was turned into opportunity by our industry...



1902



1907



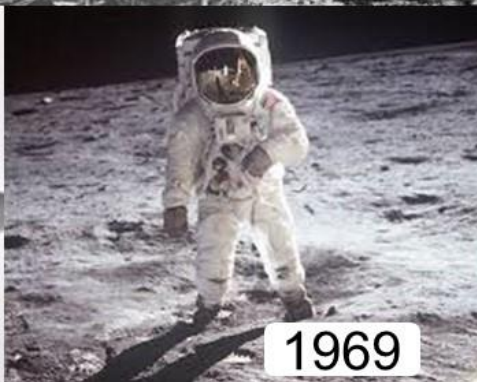
1927



1932



1947



1969



1980



2016

...Sustainability is (even more now) the next great opportunity!



GO BEYOND

Thank you!

Scott Hendershot, P.Eng, CEM
Senior Manager - Sustainability
Pratt & Whitney