COMPANY/ORG PROFILE

• Over 212,000 employees worldwide
  – 35% are based in the United States
• Present in 180 countries, including 46 United States
• $65B Net Sales

UTC Building and Industrial Systems
Pratt & Whitney
UTC Aerospace Systems
Sikorsky

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EH&S ORGANIZATION

UTC CORP

ORG
- Legal
- UTC Board
- EH&S

PEOPLE
~40

ROLES
- Governance • EH&S programs
- Remediation • Due diligence
- Leadership associates
- IT • Finance • ACE

BUSINESS UNIT

BU President
- EH&S

~60

BU governance • BU programs
- BU data management • ACE
- Corporate reporting

LOCAL SITE/OP

General Manager
- EH&S

~825

Workplace EH&S
- Environment
- Safety • Industrial hygiene
- Medical • Wellness • ACE

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UTC CORPORATE OFFICE

Data Reporting and Governance Function

• Reporting to the Business Unit (BU) EH&S VPs
  – Monthly Metrics and Compliance Report (posted on UTC EH&S website)
  – Sr. EH&S Council Meetings

• Reporting to the Business Unit Presidents, the General Counsel, and the Chairman
  – Quarterly Presidents Metrics Report (posted on UTC EH&S website)
  – Presidents Meetings

• Reporting to the Board
  – Public Interest Review Committee, twice a year

• Reporting to the Shareholders
  – Annual Report

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EH&S COMMUNICATION

• Communicate & collaborate on UTC performance and expectations.
• Provide technical resources to BUs in support of requirements and expectations.
• Analyze data trends to determine improvement opportunities and identify high risks/sites and/or operations.
• Enhance guidance, and deploy tools and focused initiatives to support the goals.

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• Deploy company level training to enhance compliance and increase technical expertise.

• Strengthen EH&S programs through benchmarking, enhanced data analysis, process improvements, technology implementation, and other tools.

• Improve and expand effective practices sharing; deliver webinars and other communications in areas of greatest EH&S need/opportunity.
UTC EH&S POLICY

Key component of corporate responsibility

“United Technologies Corporation will not be satisfied until its workplace is safe from hazards, its employees are injury free, its products and services are safe, and its commitment to and record in protecting the natural environment are unmatched.”
The EH&S Management System (EHSMS) is organized into twelve elements that support UTC’s EH&S continual improvement process:

- Policy & Leadership
- Accountability
- Communication
- Incident Investigation
- Organization
- Assessment, Prevention & Control
- Rules & Procedures
- Records Management
- Planning
- Education & Training
- Inspections & Audits
- Program Evaluation

In our EHSMS, we further document **Minimum Operating Requirements (MOR), one of which is:** All industrial hygiene hazards must be assessed, and eliminated or controlled.
UTC STANDARD PRACTICES (SP)

Address significant risks that affect the entire corporation

- Worldwide applicability
  - Comply with these standards or local laws/regulations whichever are more stringent
- Focus is on Continuous Improvement
Our policy Standard Practice-004 for Industrial Hygiene Management addresses removing the hazards:

- Use of engineering controls, where practical, when noise levels greater than 85 dBA as an 8 hour TWA have been identified.
HEARING CONSERVATION PROGRAM

Written program:

- Responsibilities
- Hearing Protection (PPE)
- Noise Monitoring
- Noise Control
- Audiometric Testing
- Employee Training
- Recordkeeping
- Program Evaluation
Audiometric Testing:

- Conducted by onsite medical or occupational health clinics
- Booths Calibrated
- All employees tested in > 85 dBA work areas
- Tests are professionally reviewed
- Initial re-tests conducted
- Results presented to employee
- Final re-tests conducted by onsite medical or occupational health clinic
HEARING CONSERVATION PROGRAM

PPE Selections:

• Based on adequate attenuation properties
• Employee choice/comfort
• Use of other PPE devices such as face shields, hard hats, and safety glasses is considered
• Temperature and climate is considered
HEARING CONSERVATION PROGRAM

Training:

• Conducted during audiogram
• Sites conduct training for all new employees
• Sites conduct annual training

OVERVIEW OF MODULES

- Introduction to Industrial Hygiene
- Stressors and Toxicology
- IH Qualitative Assessment Process
- IH Quantitative Assessment Process
- Local Exhaust Ventilation
- Ionizing & Non-Ionizing Radiation
- Personal Protective Equipment & Respiratory Protection
- Chemical Hazard Communication
- Hearing Conservation & Noise Control

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HEARING CONSERVATION PROGRAM

Noise Sampling:

• Area monitoring and informal measurements available on request
• Personal noise dosimetry
• HCP enrollment
• Improvement projects identified
• Updated periodically
HEARING CONSERVATION PROGRAM

New Equipment Review:

- All new equipment reviewed for < 85 dBA requirement
- Annual Program Evaluation
EH&S AUDIT PROGRAM

Provides management with a clear and comparable assessment of EH&S status relative to:

• Legal compliance
• Company standards
• Goals
• Other significant EH&S risks
• Effectiveness of EH&S management systems

...How well the operation is managing its EH&S risks
EH&S AUDIT PROGRAM

Measures to Achieve Consistency

- Trained auditors
- Standard work
- Standard UTC protocol
- Regulatory compliance protocol
- Risk ranking
- Validation model
- IT design mistake-proofing:
  - entry of audit findings
  - generation of score
- Scoring: <70 fail, 70-89 pass, 90+ superior
  - Failing or high achieving audits require review
SUSTAINABILITY

United Technologies provides high-technology products and services to the global aerospace and building systems industries. When it comes to our EH&S performance, UTC has a long and distinguished record.

We were among the first companies to set targets for reducing energy consumption, water use, chemical emissions and industrial waste and for improving workplace safety. We are on track to meet our 2015 goals and are setting aggressive new targets for 2020.

<table>
<thead>
<tr>
<th></th>
<th>Reduction</th>
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</thead>
<tbody>
<tr>
<td>Non-greenhouse gas emissions</td>
<td>-71%</td>
</tr>
<tr>
<td>Greenhouse gas emissions</td>
<td>-26%</td>
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<tr>
<td>Industrial process waste</td>
<td>-42%</td>
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<tr>
<td>Worldwide water consumption</td>
<td>-53%</td>
</tr>
<tr>
<td>Lost workday incident rate</td>
<td>-94%</td>
</tr>
<tr>
<td>Total recordable incident rate</td>
<td>-88%</td>
</tr>
</tbody>
</table>

Click here to visit our Sustainability website

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2015 PERFORMANCE GOALS

UTC’s objective is to reduce 100% of employee noise exposures below 85 dBA as an eight hour time weighted average, so that wearing personal protective equipment is no longer mandatory.

Value:
• Improve health and safety conditions for employees by reducing noise exposures and physical stress levels.
• Increase quality of life.
• Reduce management costs and risks for UTC.

Scope:
• All UTC locations, worldwide

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Since 2011 UTC businesses have identified and implemented over 250 projects worldwide in the effort to reduce noise exposures.

Nearly 8,000 employees now have a reduced risk of noise overexposure and physical stress as a result of these efforts.
NOISE PROJECT STRATEGIES

Noise reduction techniques that involve minimal equipment modification and cost:

• Room Treatments
• Total Enclosures
• Partial Enclosures
• Covers
• Pipes and Ducts
• Vibration
• Tuning
• Compressed Air
• Hand Tools
• Exhaust Silencers
• Noise Control (Acoustical) Materials

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NOISE PROJECT STRATEGIES

**BEFORE**

Duotronics horn was tested on a table top previously. Now it is tested inside a Lexan enclosure with the horn facing into a sound deadening chamber under the table.

**AFTER**

Greenline bells were tested in an open sound booth. Now the bells are tested in a sound deadening enclosure that still allows operators to make adjustments during testing.

**BEFORE**

Adaptafone Millennium horn was previously tested behind a loose sound curtain. New set-up uses internal horn chamber and sliding lexan front door.

**AFTER**

Benjamin horns were tested in an open booth. A Lexan shield with sound deadening materials was used to protect the operator’s hearing zone and still allow for assembly.

One site removed 77% of its employees from HCP through a number of projects to reduce employee noise exposure.

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One site removed 80% of it’s employees from HCP through a number of projects to reduce employee noise exposure
NOISE PROJECT STRATEGIES

The Use of an Enclosure With Acoustical Foam to Deburring Area

Polisher Outside Enclosure

Polisher Inside Enclosure

**Before:** 104 dBA  ➡️  **After:** 82 dBA

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NOISE PROJECT STRATEGIES

Air Gun Substitution

Before: 94 dBA  →  After: 85 dBA
NOISE PROJECT STRATEGIES

**Before:** 95 dBA  →  **After:** 0 dBA

**Transfer Cart Re-design**

<p>| | |</p>
<table>
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<tbody>
<tr>
<td><strong>dBa Reduction</strong></td>
<td>95 dBA</td>
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<tr>
<td><strong>Current State</strong></td>
<td>0 dBA</td>
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<tr>
<td><strong>Number of employees impacted</strong></td>
<td>78</td>
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</table>
**NOISE PROJECT STRATEGIES**

**Before:** 94 dBA  →  **After:** 79 dBA

**Transfer Cart Re-design**

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<table>
<thead>
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<tbody>
<tr>
<td><strong>dBA Reduction</strong></td>
<td>15 dBA</td>
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<tr>
<td><strong>Current State</strong></td>
<td>79 dBA</td>
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<td><strong>Number of employees impacted</strong></td>
<td>78</td>
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# NOISE PROJECT STRATEGIES

**Before:** 88 dBA  →  **After:** 72 dBA

<table>
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<th>Material Cart Wheels</th>
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<tbody>
<tr>
<td>dBA Reduction</td>
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<td>Current State</td>
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<td>Number of employees impacted</td>
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Before: 88 dBA  
After: 72 dBA
NOISE PROJECT STRATEGIES

Before: 92 dBA  →  After: 72 dBA

Conversion to Tug Use

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<tr>
<td>dBA Reduction</td>
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<td>Number of employees</td>
<td>24</td>
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<tr>
<td>impacted</td>
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</table>

Fork Lifts In Assembly  
Tugs
EMPLOYEE TESTIMONIALS

‘The noise reduction project is one of the most significant employee engagement and safety initiatives I have participated in. Improvements were implemented within 6 months and 147 employees were removed from the HCP. I am very appreciative of all that has been done. Noise is a distraction and now I can be more attentive to my work.’

- Kathy Williams, Surface Treating Operator, Pratt & Whitney, 2014
EMPLOYEE TESTIMONIALS

‘I liked how after the noise was reduced, I could actually hear how my tool was operating, and it made my job easier.’

- Production Operator, Carrier Manufacturing Plant, Athens, GA, 2014
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FUTURE OF THE INITIATIVE

• Expand focus to include reduction of intermittent noise exposures

• Ensure new facilities / processes are designed to minimize noise exposures

• Continue to identify technical solutions to reduce noise exposure
LESSONS LEARNED

• Establishment of corporate level goals sets the framework for achieving meaningful improvements.

• Engaging the operations and engineering organizations is key to successful project implementation.

• Recognition programs, such as the Safe-in-Sound Excellence Award, help generate renewed excitement around the noise reduction program.
SIGNIFICANCE OF THE AWARD

• Excellent opportunity for 3rd party program review.

• Award recognition provides motivation to further reduce noise exposures.

• Expanded peer-to-peer benchmarking opportunities.
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