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United Technologies Corporation: Pratt and Whitney Analysis

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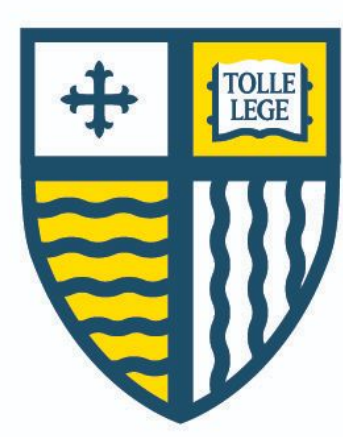
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Current Overall Strategy

The Collaboration Strategy

This strategy distributes costs, risks, and sales across third party companies. This helps negate some of the risks associated with the PESTEL categories outlined below.

PESTEL ANALYSIS

Political

1. State of the defense industry
2. Global/National Political Climates
3. Defense Spending
4. Foreign Policy
5. Active Military Flights
6. Deficit Reduction Efforts
7. Gov't Power Struggles

Social

1. Aircraft demand
2. Predicted Air Traffic
3. Fuel Price
4. Airline Profits
5. Labor Issues
6. Skills Gap
7. Consolidation
8. Bankruptcies
9. Safety Concerns
10. Health Concerns
11. Terror Attacks
12. Natural Disasters

Technological

1. Retirement of Legacy Engines
2. Technological Improvements
3. Development Timeframe

Environmental

1. PurePower Engines
2. U.S. Environmental Laws
3. Clean Air and Water Acts
4. Noise Pollution

Legal

1. Gov't/ Commercial Contracts
2. Fixed-Price Contracts
3. International Laws
4. Environmental Laws

Economic

1. Economic Growth
2. Economic Depressions
3. Vacation Rates

Mission

To be a world leader in design, manufacture, and service of aircraft engines and auxiliary power units for commercial and military aircrafts.

Market Segment

Pratt and Whitney is the leading global supplier in the business jet, military, commercial and general aviation market. They primarily produce and develop "families of large engines for wide- and narrow- body and large regional aircraft in the commercial market and for fighter, bomber, tanker, and transport aircraft in the military market" (UTC Annual Report, pg. 4).

Products

Commercial engines: PurePower PW1000G, V2500, GP7200, PW4000-94, PW-100, PW-112, PW2000, PW6000, JT8D, JT9D, Turbofan, Turboprop, and Turboshaft.
Military Engines: F100, F117, F119, F135, and T900 Engines.
Auxiliary Power Units: airborne power units, "ground power units and, small expendable and recoverable turbojet propulsion systems" (Auxiliary Power Units, para. 2).

Financial Analysis

Compared to Honeywell Aerospace and GE Aviation, Pratt and Whitney has average levels of revenue, operating income, and assets. The stand out data was the order backlog of 61,800,000 which indicates long term financial stability and guaranteed revenue for the next fiscal year. This stability can be seen in the increase in revenues of \$1,266,000 in 2017.

Five Forces Analysis

Entrants

1. Cost impediment
2. Technology is too advanced
3. Legal barriers
4. Patents/IP

Rivals

1. Honeywell Aerospace
2. GE Aviation

Buyers

1. Government and Airlines

Suppliers

1. Reverse Integrated into domestic and international suppliers
2. Exclusive rights to certain raw materials

Substitutes

1. Actuation/Air/Thermal MGT
2. Turbofan/prop/shaft
3. True Choice
4. Combat/Rotocraft Planes
5. Tanker/Transport Vehicles

VRIO Method

1. Determine the resources and capabilities
2. Categorize as:
People & Assets or Systems & Processes
and then as:
Tangible or Intangible.
3. Assess according to the criteria of being
Valuable Rare
Inimitable Organized to exploit
(VRIO).
4. Place into the categories of:
Key Strengths Key Weaknesses.

Resources and Capabilities

	Tangible	Intangible
People and Assets	PurePower C-Series Engine Contract	Patents & Intellectual Property
	International Locations	Order Backlog (64.3m)
	Gov't Defense Contracts	Collaboration Interests in IAE
	Backwards Integration into Suppliers	Aircraft & Engine Certifications & Designs
Systems and Processes	Maintenance & Servicing	UTC Employee Savings Plan
	Shop Floor Layout	ACE
	Repair & Overhaul Services	Employee Scholar Program
	Collaboration on Production & Gov't Supply	Lump-Sum Retiree Pension Distribution

Application

Key Strengths:

1. Backwards integration into suppliers
2. Efficient Shop Floor Layout
3. International Locations
4. Order Backlog
5. PurePower C series contract
6. Aircraft Engine Certification and Designs
7. Patents and Intellectual Property
8. Collaboration on producing and supplying the Government with certain engines

Key Weaknesses:

1. Government Defense Contracts Amounts

Implemented Strategies

Business

- Cost Leadership through Operational Efficiency**
Lower engine prices to acquire sales
- Product Differentiation**
PurePower engine provides a lower fuel, lower noise option for airlines with high fuel costs
- Internal diversification**
Related commercial and military product lines

Corporate

- Innovation Leadership**
Vertical assembly line increasing production capabilities which ties to patient innovation
- Patient Innovation**
Accumulating assets and resources over time for utilization in innovation efforts
- Vertical Integration/Outsourcing**
Employee integration into suppliers to troubleshoot production problems and ensure part quality
- Strategic Alliances**
IAE, EA, etc. alliances between aerospace and defense corporations

Strengths

1. Aircraft Engine Certification and Designs
2. Backwards integration into suppliers
3. Collaboration on producing and supplying the Government with certain engines
4. Efficient Shop Floor Layout
5. International Locations
6. Order Backlog (64.3 Million)
7. Patents and Intellectual Property
8. PurePower C series Contract

Weaknesses SWOT ANALYSIS Opportunities

1. Prior analyses:
Gov't Defense Contracts due to lower amounts awarded to Pratt & Whitney vs rivals.
2. New data:
Pratt and Whitney has shored up this weakness. They are the current #6 company awarded Gov't Defense Contracts.
3. They trail behind:
Lockheed Martin Corp., The Boeing Co., Raytheon Co., General Dynamics Corp., and the Northrop Grumman Corp.

1. Government contracts
The total amount generated for UTC from government contracts in 2016 was \$6,909M, 1.47% of the defense budget for the year.
2. Increased defense spending
The 2018 defense budget paves an anticipated increase in the allocation to UTC.
3. Order Backlog
This indicates future revenues as the order has been received.

Threats

1. Innovation by competitors
2. Legal challenges across countries
Different safety, work, & production requirements.
3. Economic downturns
4. Long development process
Rivals innovation during this process may negate the need for new product or innovation.
5. Delivery scheduled multiple years out
Changes in the economy could result in cancelled orders and a loss in revenue

