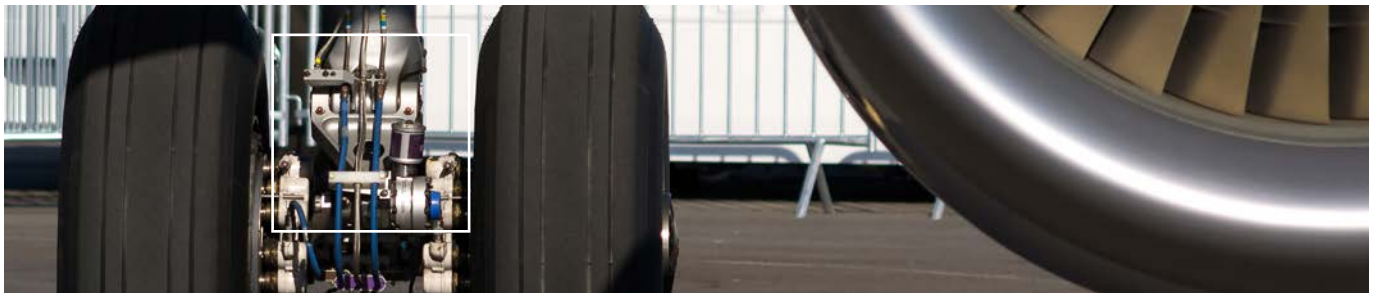


Aerospace Supplier Squeeze – Ways Out?

Arthur D. Little's strategic recommendations for commercial aerospace suppliers



The aerospace and defense (A&D) industry today struggles with a duality: defense-driven segments take hits due to significant governmental budget cuts, while commercial aircraft manufacturing is enjoying double-digit growth. Commercial aircraft deliveries at Airbus and Boeing grew by a CAGR of 7.5% between 2010 and 2015, with both companies registering record annual deliveries in recent years. Nevertheless, the commercial aircraft value chain is under stress: only half of the manufacturing firms in the chain show healthy profitability growth, and European players especially have struggled to enhance shareholder value. Which strategies should players take to surf the growth wave?

Commercial aircraft manufacturing: steady and strong growth, sizeable order backlog

Air traffic growth and the replacement of ageing fuel-inefficient aircrafts are driving the global commercial aircraft market. The two major OEMs, Airbus and Boeing, estimate an industry CAGR of around 5%, requiring 30,000-35,000 new passenger aircraft and freighters at a value of US\$ 4.4-4.8 trillion in the period 2013-2032. As of the end of 2015, order backlogs were at record highs with Boeing at 5,795 and Airbus at over 6,700, representing a combined backlog of 8-10 years' production.

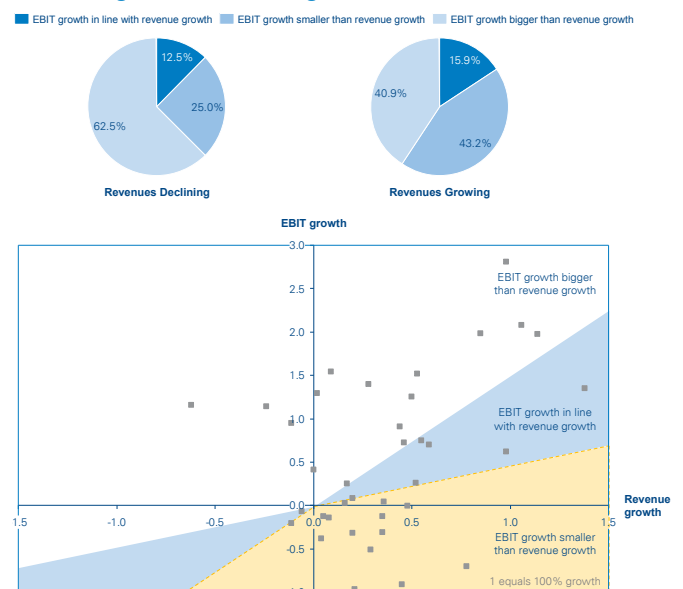
Strong top line growth, disappointing returns

Despite the promising revenue growth, not all aircraft manufacturing companies are able to sustain or grow their EBIT margin in pace with top line growth. During 2008-2012, for example, almost half of the companies suffered from profitability erosion during their growth (see figure).

The European manufacturers have struggled the most. The 2009 downturn was triggered by the high volatility of key business factors such as oil prices, economic recession, exchange rates and financing terms, affecting airlines and thus client orders. Due to the economic climate and hedge rate deterioration, European EBIT margins remained low in 2010, and only started recovering steadily from 2011 onwards. Although the 2008-12 EBIT margins indicated a recovery, in reality the 2012 coefficients of variation in Europe (92%) and US (63%)

nonetheless indicated high levels of variability, resulting in two types of players: "industry winners" and "struggling suppliers"

Revenue growth and EBIT growth



Risk-margin imbalance drives supplier base rationalization

Segmentation of the supply landscape into tiers reveals that EBIT margins tend to increase when moving upstream (see figure below). This situation creates tension: OEMs and first tier suppliers bear higher risks, but don't reap the higher returns.

Since such an imbalance is not sustainable, and OEMs and first tier players want to change the game.

Aircraft manufacturers face increasing supply chain complexity, must provide new, cutting edge offerings in a highly competitive context, and face severe cost pressure, not least due to the rise of the low cost model, increasing industry consolidation and the concentration of buyer power that this entails. To regain acceptable margins, they actively take measures by refocusing on their core competencies: aircraft design, final integration and marketing & sales. Consequently, first tier suppliers are pushed to expand their offering, into integrated solutions. Also, OEMs actively reduce their number of suppliers; as setting up these partnerships is time intensive and comes at high cost it is only done very selectively.

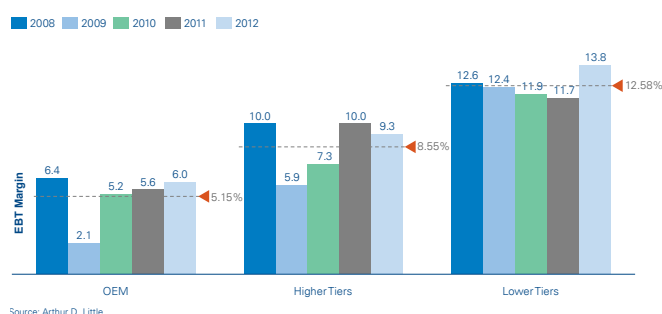
In response, tier 1 suppliers adopt similar strategies, and a ripple effect translates throughout the entire value chain of tier 2, 3 and 4 suppliers. The ingredients of change are similar, and create a new context for each type of player.

Characteristics of this new playing field require players to:

- Have the ability to provide integrated (sub)systems or solutions
- Take risks by sharing product / solution development costs together with the client
- Invest more time into managing client relationships, and building tailored value propositions per client
- Provide global solutions, leveraging a global footprint in terms of supply and manufacturing as needed
- Structurally and fiercely reduce cost

Combining all of the above is difficult. Yet, the supply base reduction wave leaves little choice, and has led many players to make price concessions, negatively impacting overall profitability. Yet, winning companies manage to capture growth while enhancing their profit margins.

EBIT margins tend to increase when moving upstream the commercial aerospace value chain



Supplier of the future: a dual challenge

Two key strategic dimensions are crucial for any future supplier in order to stay competitive:

1. **Ability to deliver greater volumes efficiently:**
Manufacturers should be able to sustainably respond to growing orders / increasing production rates
2. **Ability to adapt to a more complex offering:**
Manufacturers should be able to handle increased sophistication and integration

“Suppliers that do not agree to cut their prices will find themselves on the outside”

Jim McNerney (CEO Boeing)

Both major OEMs are actively taking measures to tackle the unnatural risk/margin balance in an attempt to reach double digit profitability levels. In this context, they are cutting costs, increasing production levels and exploring service revenue streams. Furthermore, OEMs are continuously squeezing their suppliers to reduce contract prices. For example, Boeing’s “Partnering for Success” initiative aims at reducing its suppliers’ prices and has already been applied for determining the supplier base of the 737 MAX program. As stated by Boeing’s CEO Jim McNerney, suppliers will have to cut prices or will find themselves on the “no-fly” list, excluded from future programs.

Source: Aviationweek, SeattleTimes

The first challenge relates to “lean”: putting in place leading edge operations that are capable of reaching maximum efficiency with minimum investment. Doing “more of the same” at a rock-bottom cost position directly addresses one of the key concerns of the OEMs and tier 1 suppliers: being able to follow the high growth pace of the industry, despite the stressed-out supply chain, while maintaining a low cost position to remain competitive.

The second challenge relates to diversification into other airplane parts/components. As the supply base is being reduced, players need to gradually expand their offering, both in depth (e.g. into systems and solutions, into assemblies and sub-assemblies) and breadth (e.g. wider product range, broadening of the materials on offer). This diversification is costly: it typically comes with new services such as design and development of new parts or modules, as well as creation of new capabilities related to these new products offered by the firm. Keeping down the cost of this additional complexity is difficult, with many firms failing or suffering flatter than expected learning curves. In turn, this negatively affects the margin.

In order to become/remain a supplier of the future, it is essential to address both challenges. Easier said than done: the high number of companies not being able to translate revenue growth into EBIT growth proves the difficulty of this transformation, triggering the next question: *how to successfully enable the transformation?*

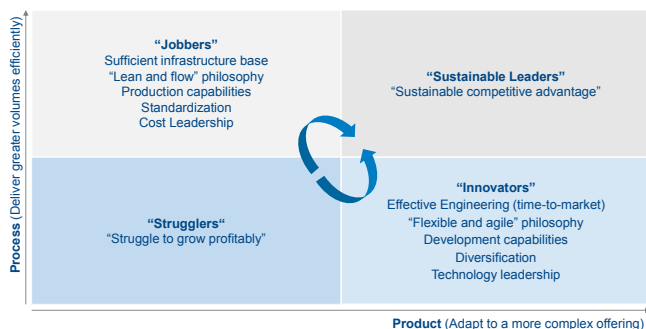
How to make the transformation?

Most commercial aircraft component / system manufacturers need to undergo a one- or two-step transformation (see Figure below). This transformation addresses both challenges mentioned earlier, which in practice implies demanding requirements in terms of process and product/service capabilities. Addressing these requirements is essential to make the transformation happen.

On the *vertical axis*, the ability to deliver greater volumes efficiently can be achieved through optimizing, mastering or re-thinking the core company direct and support processes. Therefore, the following process-related demands will need to be addressed:

- Deployment of a **competitive infrastructure** (asset base), able to meet current and future demand
- Implementation of a “**LEAN** and flow-oriented” philosophy throughout the whole organization
- Continuous development and effective maintenance of required **production capabilities**
- Sustained advantage in the trend towards “**modularization**”, i.e. more automation, integration and standardization
- Relentless focus on **cost leadership**
- Development of a **global presence/company span**

The two key challenges impose demands on suppliers, both in terms of processes and in terms of products/services.



Source: Arthur D. Little

On the *horizontal axis*, the ability to adapt to a more complex offering can be achieved through constantly optimizing, re-inventing and balancing the product/service offering and product

mix. In order to do so, a number of key levers deserve top management attention. These include:

- **Process excellence** for engineering and R&D. This includes the incorporation of a “flexible and agile” mindset throughout all direct and support functions
- Continuous **capability development**
- Pro-active search for **new growth opportunities** (e.g. active pipeline management of leads, new applications, new offerings, ...)
- Development of **strategic product platforms** to focus commercial and innovation efforts on what a company is good at and wants to be known for (its core specific materials, technology or applications, depending on the type of player)
- Sustained focus on **technology leadership** in development, related manufacturing etc.
- Value adding **partnerships/collaborations**

While *Jobbers* and *Innovators* need to transform along a single axis, *Strugglers* face the challenge of going through a two-step transformation. With the ambitious timelines the OEMs have set to rationalize their supply base, the timeframe is short and triggers a risk for the *Strugglers* to get paralyzed by an overload of too many simultaneous changes. Therefore it is critical for these struggling companies to focus on the right priorities and plan their transformation step by step. Eventually, *Strugglers* too can gain real competitive advantage and become *Sustainable leaders*.

Safran – The road to becoming a *Sustainable Leader*

Since 2010, Safran is observably developing itself as a *Sustainable Leader*. By focusing on both strategic challenges, Safran succeeded in positioning itself as a key industry player and enhancing both its top- and bottom line performance. For example, between 2011 and 2014, Safran’s aircraft equipment division registered a margin growth CAGR of 22%, relative to a revenue CAGR of 13% (source: company annual reports).

As stated by Jean-Paul Herteman (CEO), Safran has put considerable effort in unifying the group and striving for cost leadership (e.g. the consolidation of support functions). Furthermore, joint ventures/collaborations were being set up and targeted start-ups/companies were being acquired to ensure Safran’s position on the product/service innovation frontier (e.g. electrical taxiing system, in collaboration with Honeywell).

Conclusion: no choice but transformation

Against a backdrop of high volatility affecting many industries, commercial aircraft manufacturing seems to be enjoying important growth in the short term. However, not without a key challenge: finding out how to translate revenue growth into EBIT

growth, while facing increasing competitive pressures that are driven by supplier base rationalization and overall cost reduction. With almost half of the commercial aircraft-manufacturing suppliers having struggled to capture revenue growth profitably in recent years, the hurdles to overcome are significant.

This Viewpoint highlights a dual challenge: a supplier of the future will not only be able to handle greater volumes efficiently, but will also need to provide a more complex offering. In order to successfully respond on these challenges, industry players need to address corresponding process- and product/service-related demands, implying a one or two-step transformation.

Especially for the latter, an important risk of “change paralysis” should be managed. The ability of the organization to absorb the change can be a real growth-blocker. Prioritization and effective planning are essential to guarantee success.

In conclusion, the industry outlook may be bright, the challenges painfully real, but one thing is sure: suppliers in this industry have no choice... but transformation.

Arthur D. Little: a key partner

As the world's first consultancy, Arthur D. Little has been at the forefront of innovation for more than 125 years. We are acknowledged as a thought leader in linking strategy, technology and innovation.

Arthur D. Little has performed significant transformation programs with a number of key players in the industry in order to secure growth and boost profitability. Key areas on which we have helped our clients in the commercial aircraft industry to transform include:

- **Operations strategy and operational excellence:** defining industrial vision, defining and selecting optimal operations models, improving productivity and on-time delivery, reducing working capital and cost levels
- **Sourcing and supply chain:** assessing and improving purchasing value excellence, adapting organizational setups and processes in order to manage increased complexity and higher stress levels in the supply chain
- **Process and organizational design:** defining lean organizations, optimizing headcount (short/long term), redesigning processes, cultural change
- **Technology and innovation management:** defining innovation strategies and processes, developing product and technology strategy maps to support innovate for growth & competitiveness programs, build innovation capabilities
- **Global transformation:** turning local or regional companies into true global players, by setting out future blueprints in terms of industrial structure, organization setup, and key enablers

Contacts

Kurt Baes

Belgium
baes.kurt@adlittle.com

Willem Romanus

Belgium
romanus.willem@adlittle.com

Bernd Schreiber

Central Europe
schreiber.bernd@adlittle.com

Jaap Kalkman

Middle East
kalkmann.jaap@adlittle.com

Russell Pell

UK, Hong Kong
pell.russell@adlittle.com

Delphine Knab

France
knab.delphine@adlittle.com

Antoine Doyon

China
doyon.antoine@adlittle.com

Klas Anderlind

Nordics
anderlind.klas@adlittle.com

Jésus Portal

Spain
portal.jesus@adlittle.com

Saverio Caldani

Italy
caldani.saverio@adlittle.com

Authors

Kurt Baes, Willem Romanus, Mattias Banck

Arthur D. Little

Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients to build innovation capabilities and transform their organizations.

Our consultants have strong practical industry experience combined with excellent knowledge of key trends and dynamics. Arthur D. Little is present in the most important business centers around the world. We are proud to serve most of the Fortune 1000 companies, in addition to other leading firms and public sector organizations

For further information, please visit www.adlittle.com

Copyright © Arthur D. Little 2016. All rights reserved.