

SURVEY

Top Management Issues Radar 2010

European Aerospace&Defense industry

Roland Berger
Strategy Consultants

WHY PRODUCE A TOP MANAGEMENT ISSUES RADAR?

As a leading consultancy to top management in the European Aerospace&Defense sector, Roland Berger Strategy Consultants actively supports industry leaders in identifying challenges, structuring future solutions and driving the necessary change in their organizations.

In 2008 we identified a growing need for senior executives to discuss the key issues that drive the industry with their peers. Therefore, we launched a “Top Management Issues Radar” to support executive-level thinking in the European Aerospace&Defense industry.

The latest survey was conducted between March and April 2010, involving more than 100 top industry executives and representing a broad range of business segments and positions in the industry value chain. The survey captured their views on two hot topics:

- > How did the **crisis impact the industry**? What **measures** did companies take in response? And what actions are planned to **prepare for a recovery**?
- > What are companies’ strengths and weaknesses in terms of **Programme Management**?

We trust you will find the conclusions presented insightful and hope they will support your strategic thinking and decision making. We would welcome the opportunity to have a more detailed discussion directly with you on any of the issues presented.

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THE 2010 SURVEY RESULTS ARE BASED ON CONTRIBUTIONS FROM SENIOR EXECUTIVES ACROSS THE EUROPEAN AEROSPACE&DEFENSE INDUSTRY

SAMPLE DESCRIPTION

- > Survey responses from more than 100 top managers across six countries (Belgium, France, Germany, Italy, Spain, UK)
- > 48 firms represented, covering a range of business segments (commercial aeronautics, defense&security, space)
- > Coverage of different positions in the value chain, from OEMs to Tier-1, Tier-2 and pure service providers
- > Approximately one third of the participants were CEOs

EXAMPLES OF PARTICIPATING COMPANIES



2010 SURVEY HIGHLIGHTS

TABLE OF CONTENTS

- a.** Companies' agendas in 2010
- b.** A year of crisis: operating in turbulent times
 - > Impacts of the crisis on the European Aerospace&Defense industry
 - > Reactions to the crisis and preparations for the recovery
- c.** The Programme Management challenge

PROGRAMME MANAGEMENT AND MARKET STRATEGY / GLOBALIZATION REMAIN THE LEADING PRIORITIES IN THE AEROSPACE&DEFENSE INDUSTRY FOR THE 4TH YEAR IN A ROW

TOP PRIORITIES IN COMPANIES' AGENDAS [4 MOST FREQUENT ANSWERS]



RATIONALE AND INDUSTRY TRENDS

Throughout growth and crisis, Aerospace&Defense companies have remained focused on two main priorities

Programme Management has remained the greatest concern:

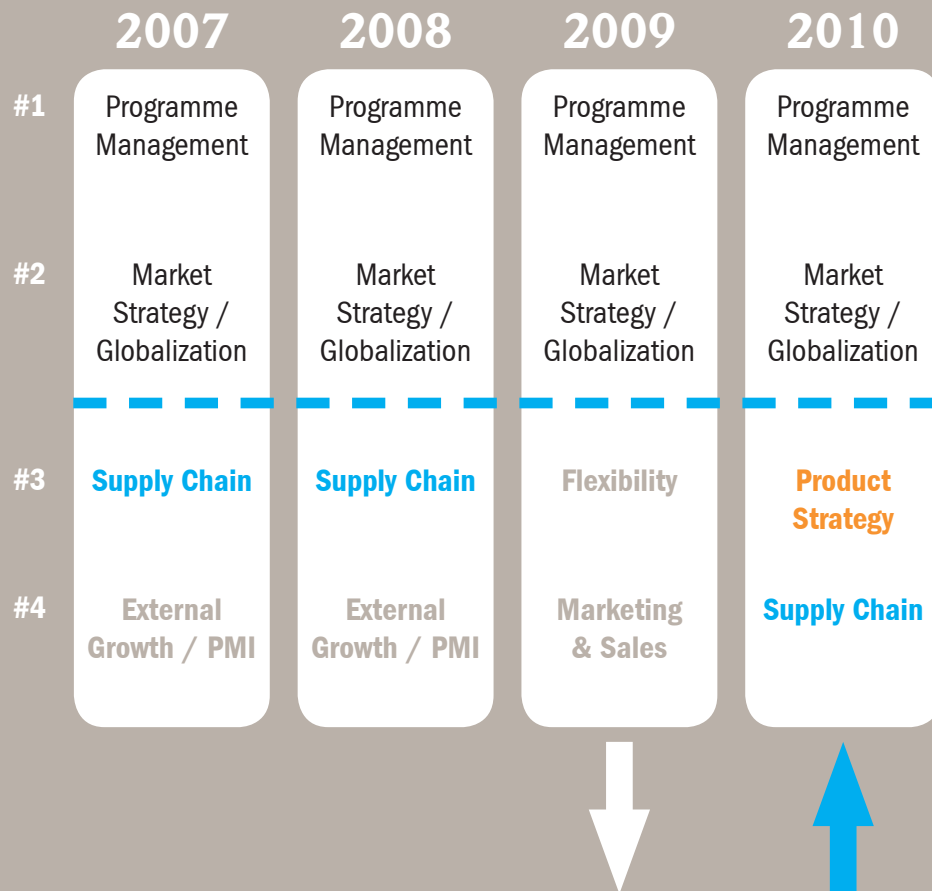
- > Efficiently delivering current Programmes is critical to a company's commercial success – several companies have had to deal with significant delays (up to 47 months) and cost overruns (up to 78% of initial cost) in recent years
- > Greater external and internal constraints have made effective Programme Management and increasingly challenging task

Market strategy / globalization: Companies have continued to search for new strategic options to cope with:

- > Limited industry growth prospects, particularly in Europe (pressure on Defense budgets, few new commercial Programmes planned, ...)
- > The global economic crisis

PRODUCT STRATEGY AND SUPPLY CHAIN ARE ALSO EXPECTED TO BE HIGH PRIORITY ISSUES FOR COMPANIES IN 2010

TOP PRIORITIES IN COMPANIES' AGENDAS [4 MOST FREQUENT ANSWERS]



RATIONALE AND INDUSTRY TRENDS

Product strategy (e.g. product positioning, innovation strategy) is expected to be a key focus for companies in 2010 as it provides additional development options and is complimentary with Market strategy / globalization

- > Availability of engineering resources will be key for implementation. As they remain scarce, engineering efficiency programmes and off-shoring are likely to gain more importance in the future

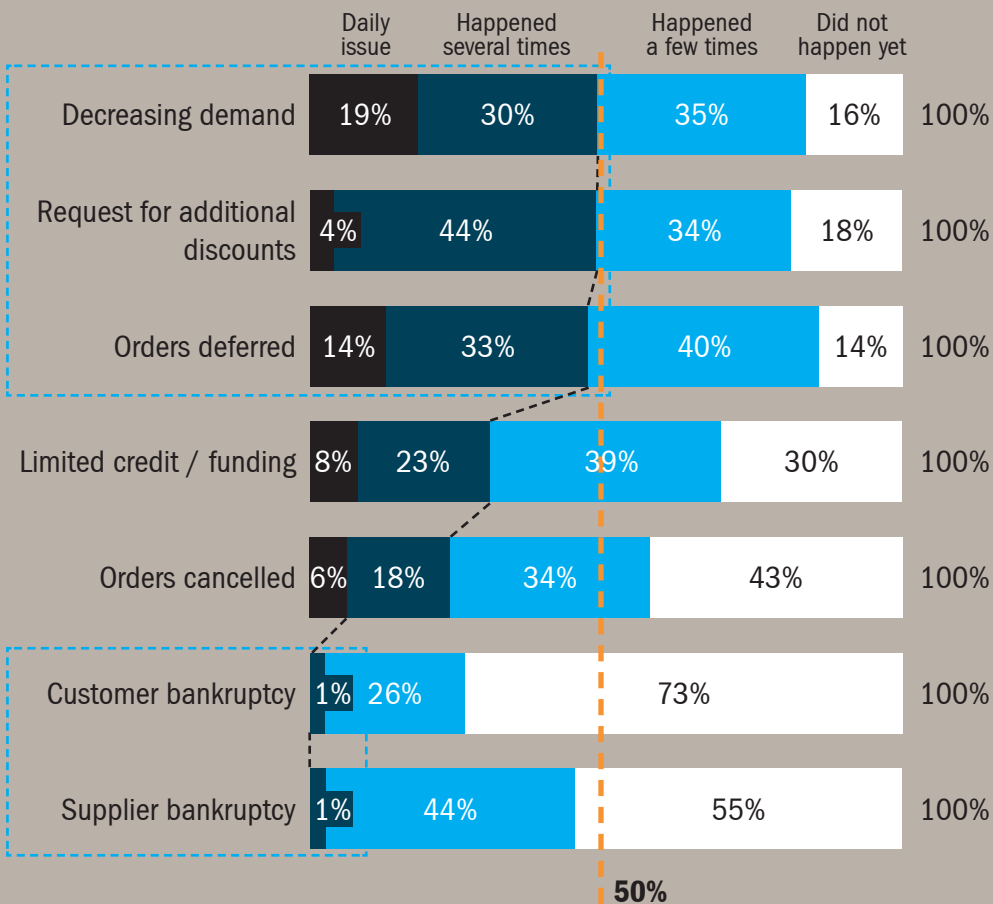
Once again, **Supply Chain** is expected to be an important issue for companies but for different reasons than in previous years:

- > 2007-08: Strong focus on Supply Chain to secure deliveries during a period of high production rates and ramp-ups (suppliers saturated)
- > 2010: Strong need to monitor the impact of the crisis on suppliers, particularly risk-sharing partners in key programmes (e.g. bankruptcy risk, cash constraints for financing ramp-up)

In 2010, companies are expected to focus less on two crisis-related topics: **Flexibility** (how to reduce production capacity without compromising the ability to benefit from the next up-turn) and **Marketing & sales** (how to maintain sales during an industry downturn)

DESPITE REDUCED SALES, FEW AEROSPACE&DEFENSE COMPANIES WERE FORCED INTO BANKRUPTCY DURING 2009

PERCEIVED IMPACTS OF THE CRISIS [% ANSWERS]



RATIONALE AND INDUSTRY TRENDS

The crisis placed pressure on Aerospace&Defense companies' revenue streams:

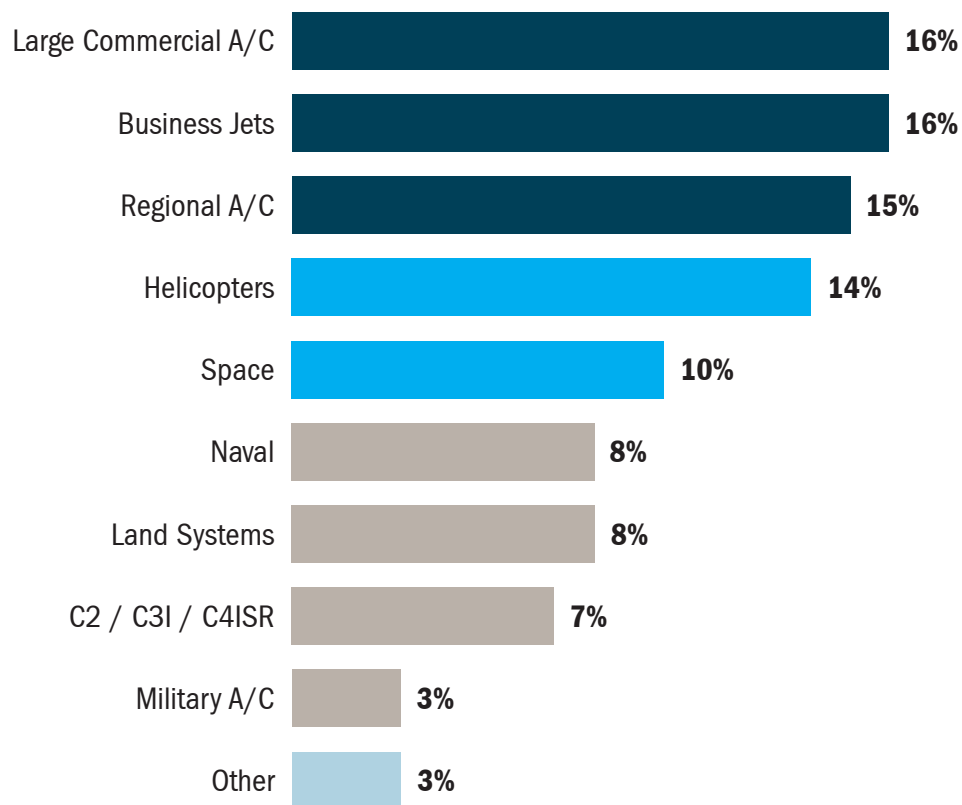
- > Reduced sales volume due to decreased demand (perceived as a "daily issue" or "happened several times" by 49% of respondents) and deferred orders (47% of respondents saw it as a "daily issue" or "happened several times")
 - Slow down of passenger traffic
 - Limited credit / capital available to airlines and leasing companies
 - Lower attractiveness of next generation of A/C (lower fuel price)
- > Price pressure (48% of respondents saw requests for additional discounts from customers as a "daily issue" or "happened several times")

However, few Aerospace&Defense companies were forced into bankruptcy because:

- > Companies had benefited from several years of positive results prior to the recent downturn (e.g. high production rates)
- > Companies had carefully managed their investments over the last ten years (limited over-capacity)

INDUSTRY SEGMENTS SERVING COMMERCIAL END-CUSTOMERS HAVE BEEN THE MOST AFFECTED BY THE CRISIS

BUSINESS SEGMENTS IMPACTED [% OCCURENCE AS THE MOST IMPACTED]



Source: Roland Berger "Top Management Issues Radar 2010" survey

RATIONALE AND INDUSTRY TRENDS

Industry segments serving Commercial end-customers (large commercial aircraft, regional aircraft and business jets) have been most heavily affected by the crisis (e.g. 86% reduction in net incoming orders for 100 PAX+ commercial aircrafts between 2007 and 2009 and a 84% reduction for regional aircraft). These segments appear to be more sensitive to changes in the business climate compared to governmental segments

Segments serving governmental markets (e.g. Naval, Land Systems, Military A/C) have been protected by

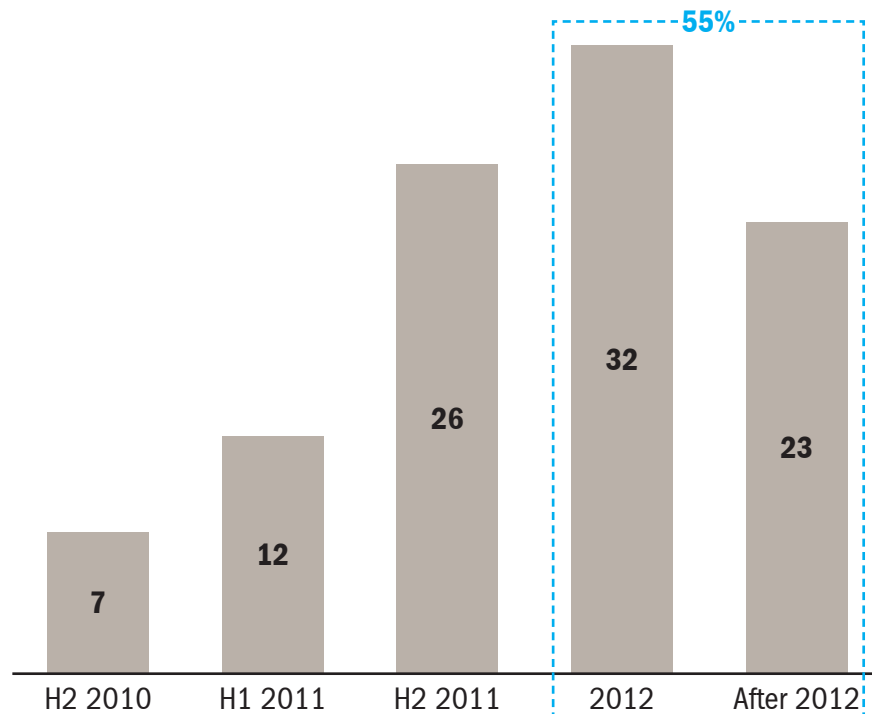
- > The long lead-times associated with the governmental decision cycle
- > Decisions by several governments to continue to support the industry during the crisis period by maintaining their defense budgets

However, in the long term, the Defense segment is expected to suffer from cuts in Military spending as governments seek to reduce their budget deficits

- > Lower order-to-delivery lead-times
- > Greater contractual flexibility (customers able to significantly modify purchase orders)

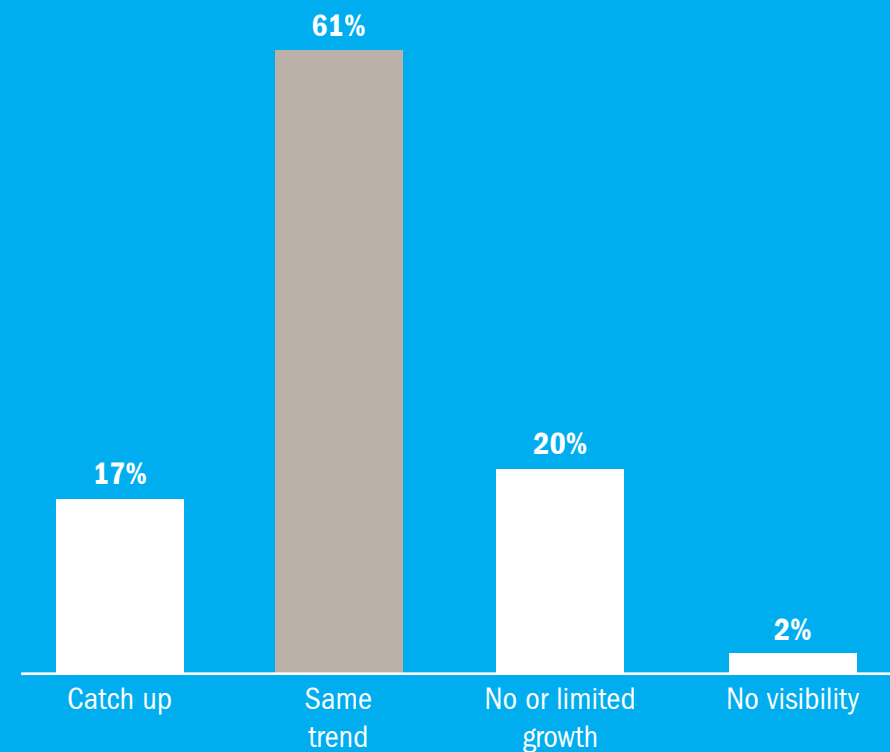
HALF OF INTERVIEWEES EXPECT THE INDUSTRY TO RETURN TO PRE-CRISIS GROWTH IN THE NEXT 2 YEARS

EXPECTED CRISIS END [% ANSWERS]



> More dynamic industry segments serving Commercial end-customers are expected to recover most rapidly

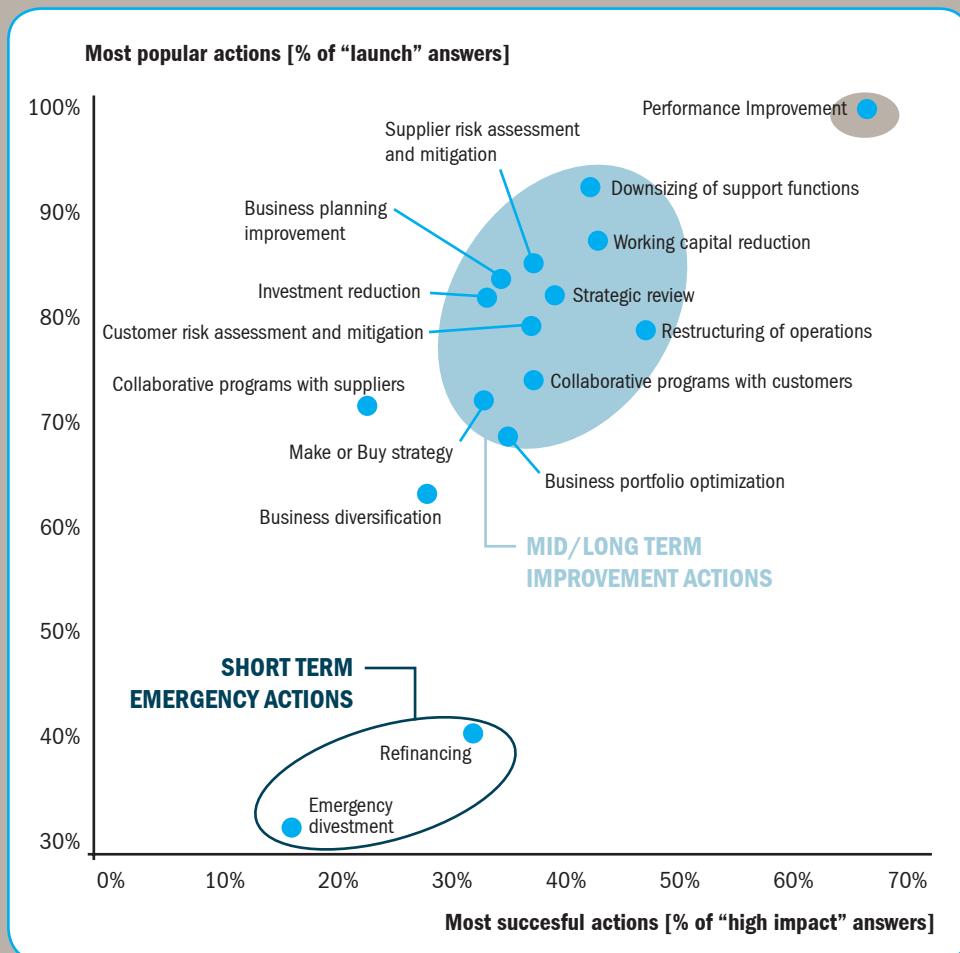
EXPECTED GROWTH RATE AFTER THE CRISIS [% ANSWERS]



> Once the crisis is over, the Defense segment is expected to suffer from cuts in State spending required to limit budget deficits

MOST COMPANIES HAVE FAVOURED MID / LONG TERM IMPROVEMENT MEASURES TO COUNTER THE CRISIS AND OUTPERFORM COMPETITION DURING THE RECOVERY

ACTIONS TO COUNTER THE CRISIS / PREPARE FOR THE RECOVERY



Source: Roland Berger "Top Management Issues Radar 2010" survey

RATIONALE AND INDUSTRY TRENDS

Mid / long term improvement actions have been preferred:

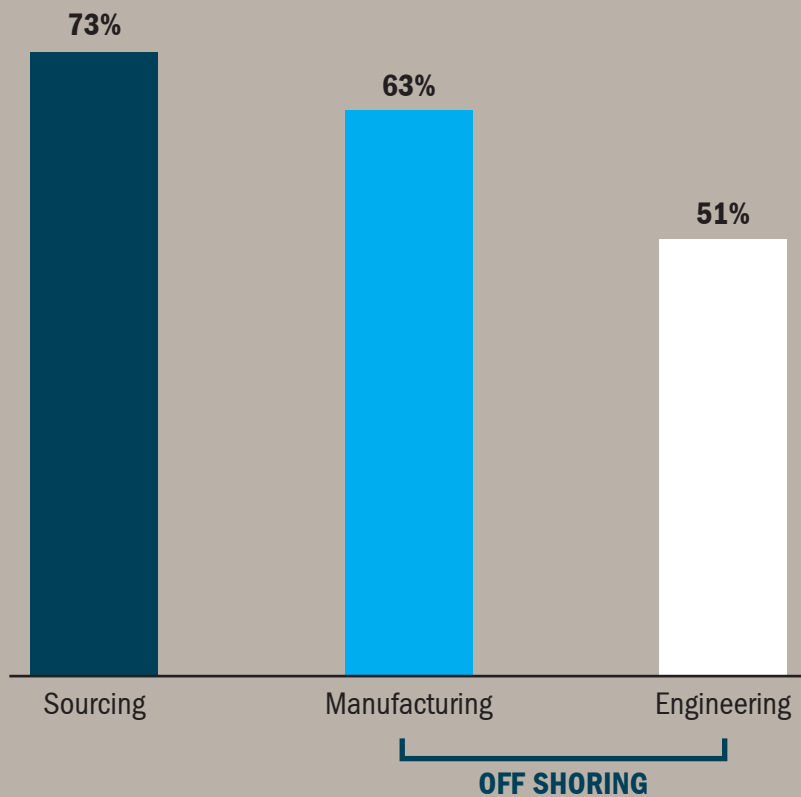
- > The impact of the crisis was not severe enough to require extreme / emergency actions (divestments and refinancing)
- > Companies have preferred actions that do not compromise their potential to outperform the competition when the market recovers

In most cases, the actions undertaken have not proven successful:

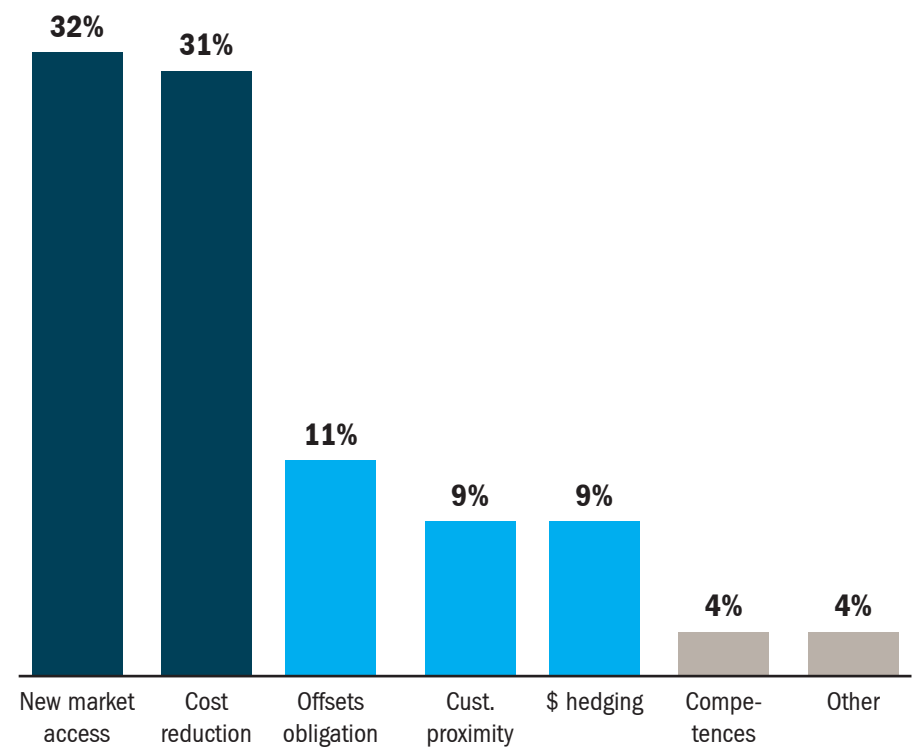
- > Too many actions have been undertaken at the same time (insufficient resources and Management attention)
- > Many companies facing Programme delays / cost overruns are already in a fire-fighting mode

MOST COMPANIES PLAN TO MOVE ABROAD TO ACCESS NEW MARKETS AND REDUCE COSTS

INTENTION TO INCREASE THE SHARE OF WORK CONDUCTED ABROAD [% OF YES ANSWERS]



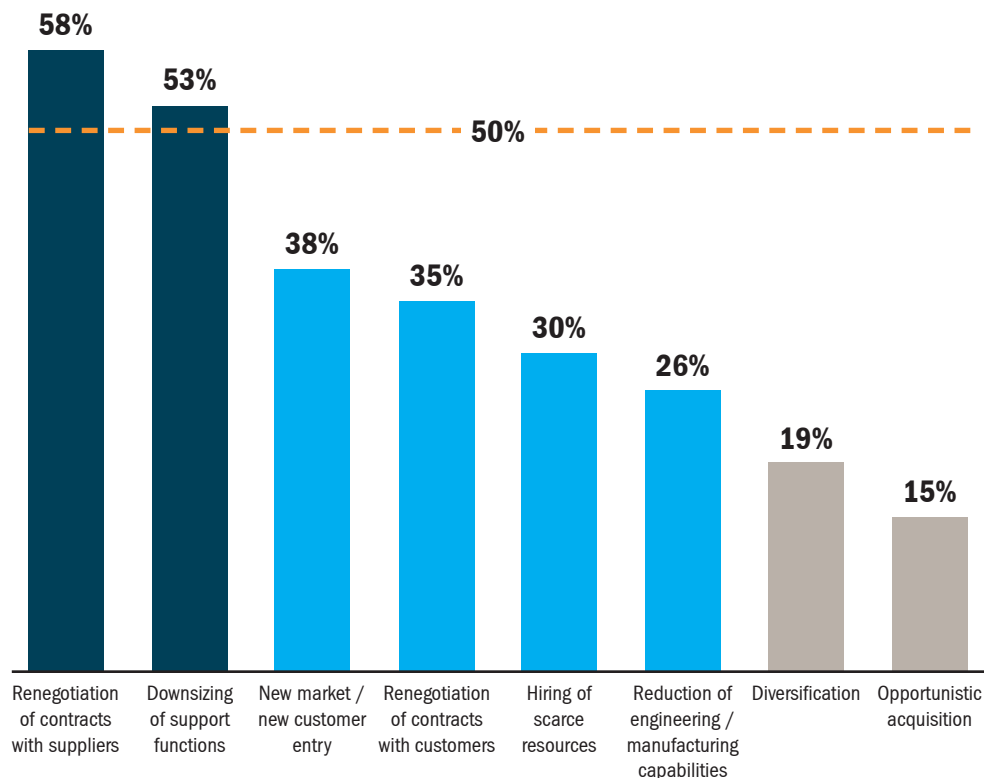
OBJECTIVES PURSUED WHEN MOVING ABROAD [% OF ANSWERS]



Source: Roland Berger "Top Management Issues Radar 2010" survey

AEROSPACE&DEFENSE COMPANIES HAVE TAKEN ADVANTAGE OF THE CRISIS TO RENEGOTIATE SUPPLY CONTRACTS AND DOWNSIZE SUPPORT FUNCTIONS

OPPORTUNITIES RESULTING FROM THE CRISIS [% OF YES ANSWERS]



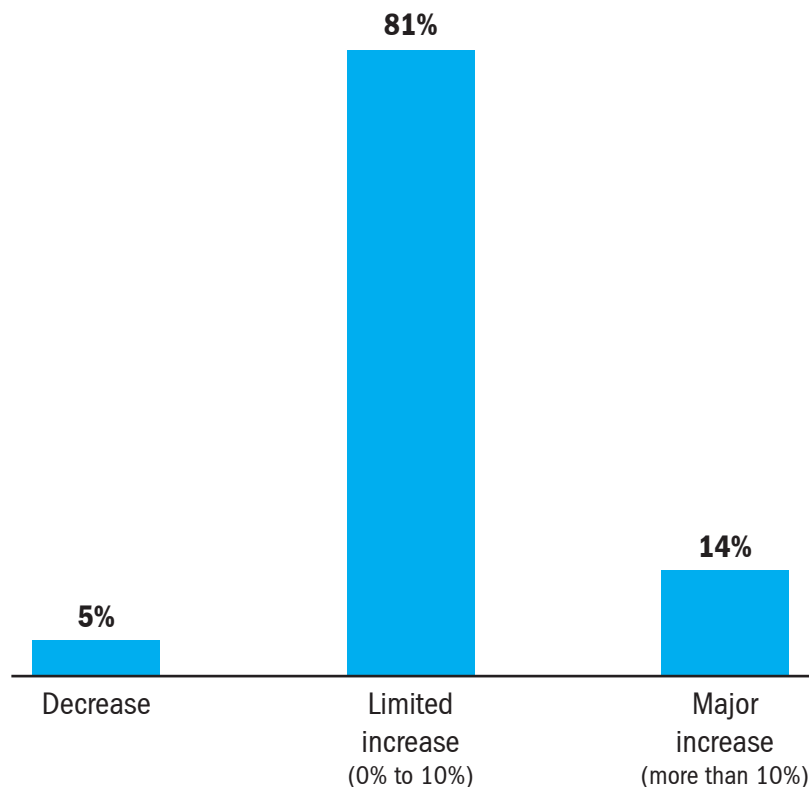
Source: Roland Berger "Top Management Issues Radar 2010" survey

RATIONALE AND INDUSTRY TRENDS

- > The crisis has increased the focus on areas where little attention had been directed during the boom years
- > The two most popular actions (renegotiation of contracts with suppliers and downsizing of support functions) have supported cost reduction objectives
- > Downsizing plans were announced by all major Aerospace&Defense companies (OEM, Tier-1, Tier-2) – companies found scope for improvement as there had been little focus on this subject in recent years
- > Companies seem to have favoured defensive initiatives. Offensive actions (e.g. diversification, opportunistic acquisition) appear less popular because:
 - Low visibility of the next few years (prevents risk taking)
 - Opportunities did not materialise (e.g. companies were not forced to sell businesses or relinquish scarce resources)

IN 2009, AEROSPACE&DEFENSE COMPANIES HAVE PUT M&A PROJECTS ON-HOLD — HOWEVER, MOST FORESEE AN INCREASE IN M&A ACTIVITY IN 2010

EXPECTED M&A ACTIVITY EVOLUTION [2010 VS. 2009, % OF ANSWERS]



RATIONALE AND INDUSTRY TRENDS

The size and volume of M&A deals in the Aerospace&Defense sector decreased significantly in 2009 compared to 2008:

- > Number of deals: -35 %
- > Average deal value: -10% (USD M)
- > The decrease is due to:
 - Adverse financial market conditions reducing companies' ability to fund acquisitions
 - Reduced availability of debt due to conservative lending policies of banks
 - Frequent disparity between sell-side and buy-side valuations

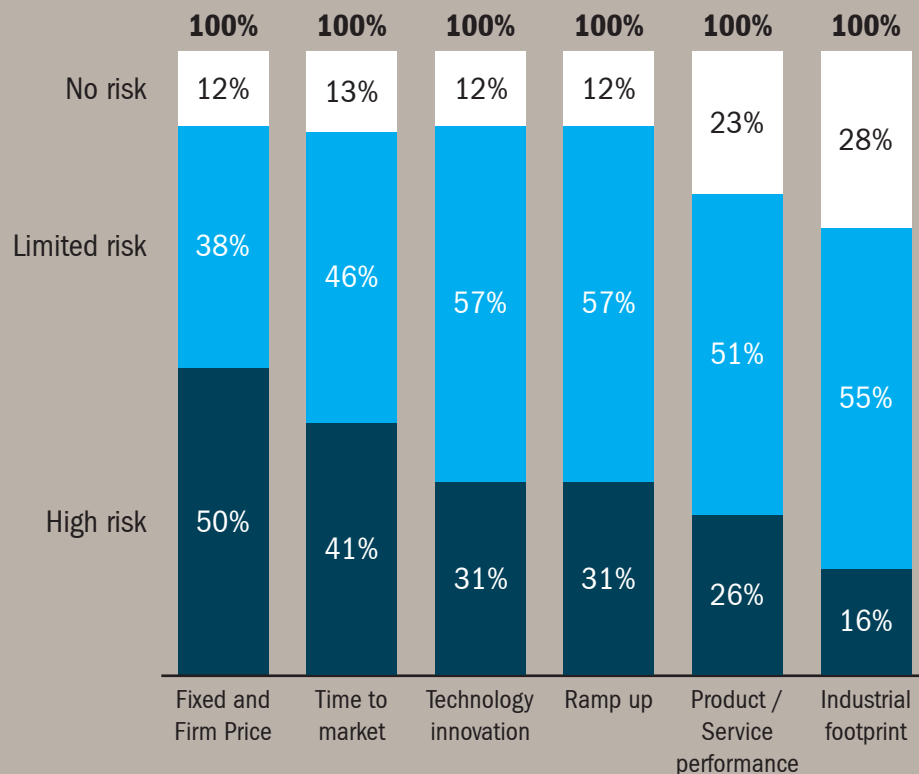
The total value of M&A deals in 2009 was back to levels observed in 2003-4 (5 times lower than in 2006 or 2007)

However, most foresee a limited increase in the number of M&A transactions between 2009 and 2010

- > The majority of respondents anticipate a slow to moderate industry recovery following the crisis and therefore no significant increase in companies' ability to fund acquisitions
- > With banks forecast to maintain conservative lending policies in 2010, there is not expected to be a significant increase in the availability of debt

MOST AEROSPACE&DEFENSE COMPANIES HAVE ACCEPTED MULTIPLE CHALLENGES ON THEIR RECENT PROGRAMMES – REMAINING ROOM FOR MANOEUVRE IS LIMITED

MAIN RISKS TAKEN ON RECENT PROGRAMMES [% ANSWERS]



RATIONALE AND INDUSTRY TRENDS

Aerospace&Defense companies face more and more market and customers requirements:

- > Prices to compete with emerging market players
- > Off-set requirements
- > Time to market
- > Frequency of product renewals (reduced life cycles)
- > Evolution of regulations (e.g. environnement)

Market and customers requirements have forced companies to accept multiple challenges on their recent Programmes and to set new constraints for Programme Management (e.g. re-use, out-sourcing, risk sharing partnerships...)

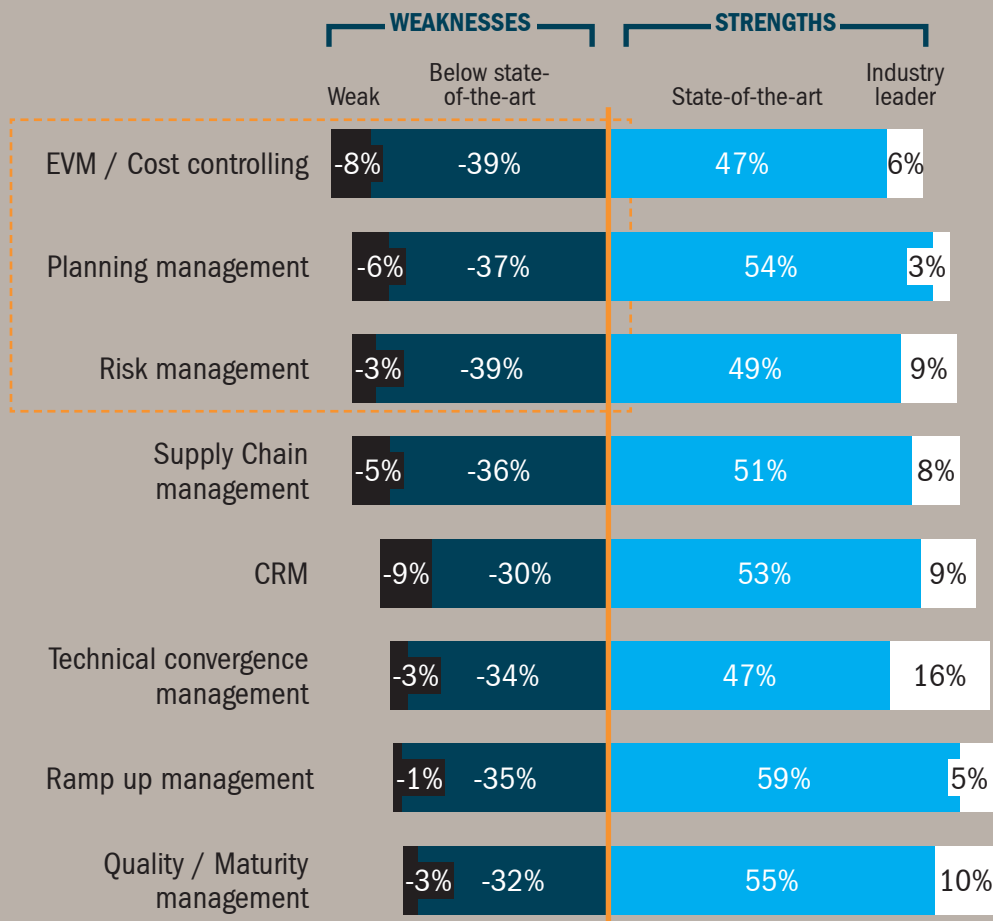
The remaining room for manoeuvre at a Programme Management level is limited

- > Tight steering required of all Programme dimensions
- > Very strict requirement to react immediately to any deviation vs. plans (no buffer)
- > Limited ability to mobilize resources (time, money, people) to rectify deviations vs. plans

Source: Roland Berger "Top Management Issues Radar 2010" survey

MORE THAN 40% OF RESPONDENTS THINK THAT THEIR COMPANIES ARE NOT STATE-OF-THE-ART IN BASIC PROGRAMME MANAGEMENT AREAS (PLANNING / COST / RISKS)

PERCEIVED STRENGTHS AND WEAKNESSES OF PROGRAMME MANAGEMENT PRACTICES [% ANSWERS]



RATIONALE

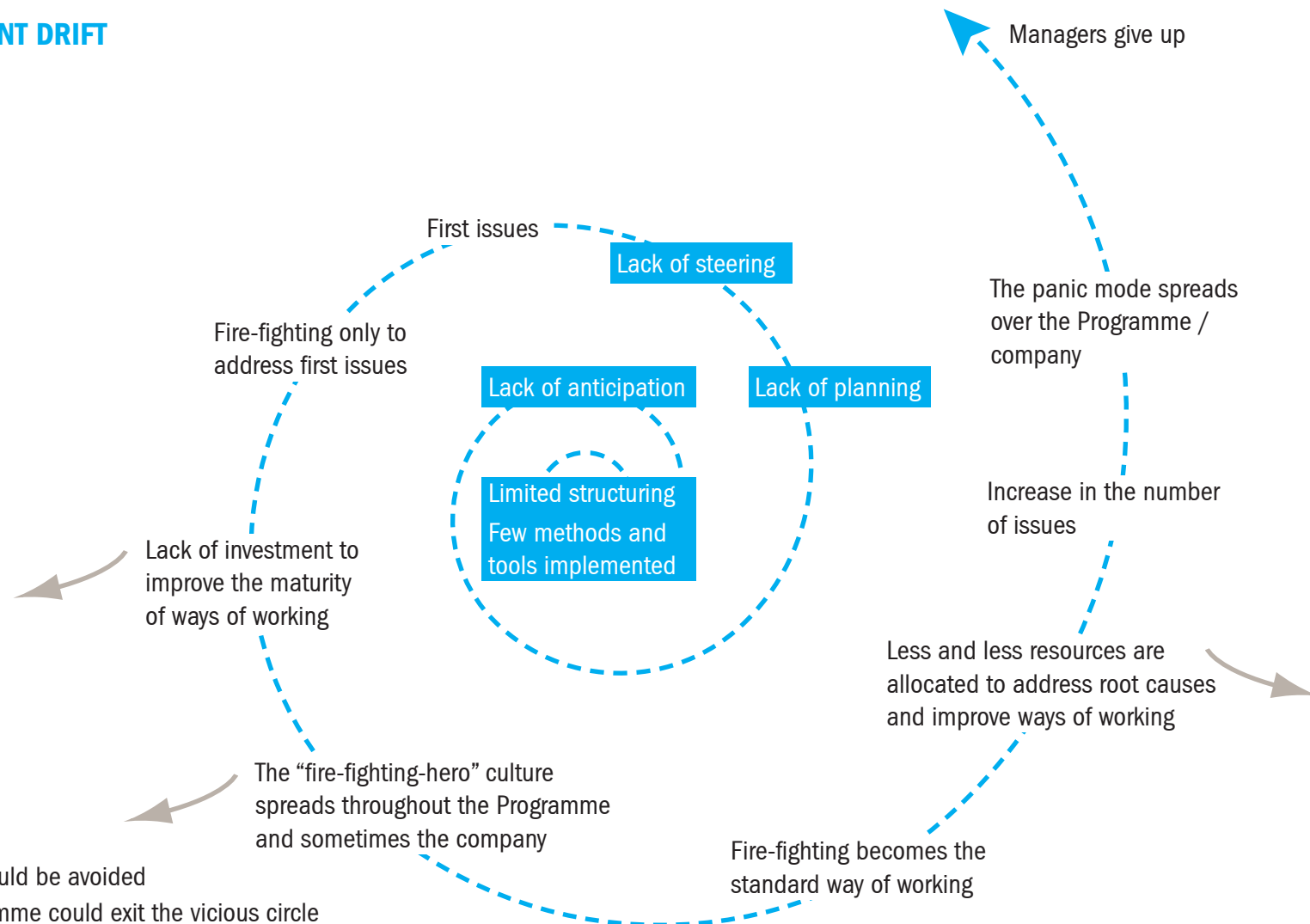
Programme Management methods and tools are well known but their implementation remains problematic:

- > Complex Programme organizations
- > Complex interfaces with customers / suppliers particularly in New Collaborative Models / Risk Sharing Partnerships
- > Competing risk sharing commitments for Tier-1 suppliers involved in multiple programmes
- > Limited investments made to develop long-term Programme Management know-how and competencies
- > Limited cross-fertilization of best practices between Programme teams

Significant efforts to improve Programme Management are often only undertaken only when a performance recovery is required

EFFORTS TO IMPROVE PROGRAMME MANAGEMENT SHOULD BE UNDERTAKEN BEFORE FIRE-FIGHTING BECOMES THE STANDARD WAY OF WORKING

PROGRAMME MANAGEMENT DRIFT

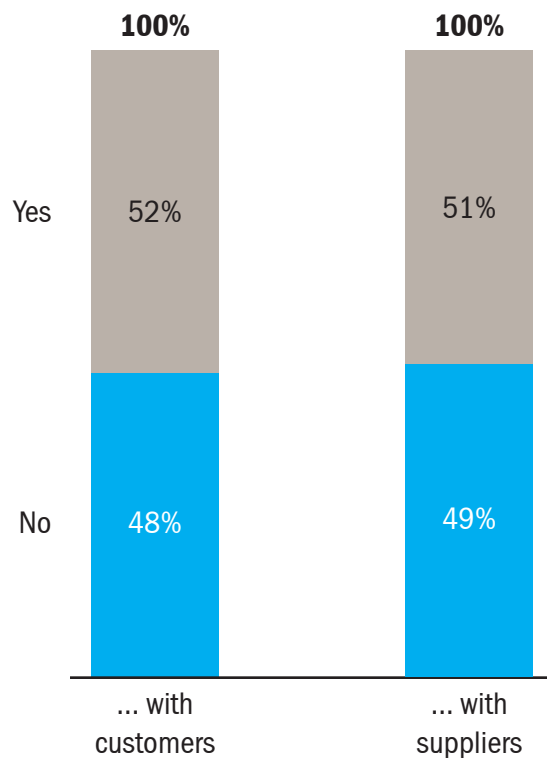


■ At this stage, the drift could be avoided
← At this stage, the Programme could exit the vicious circle

Source: Roland Berger experience

ALMOST HALF OF RESPONDENTS HAVE ALREADY PURSUED NEW COLLABORATIVE MODELS (NCM) OR JOINT IMPROVEMENT PLANS (JIP) WITH CUSTOMERS AND SUPPLIERS

COMPANIES WHO HAVE PURSUED NEW COLLABORATIVE MODELS/ JOINT IMPROVEMENT PLANS [% ANSWERS]



RATIONALE AND INDUSTRY TRENDS

The increasing number of Programmes conducted in parallel has generated a need for New Collaborative Models between OEMs and Tier-1

OEMs have re-allocated most of their resources up- and down-stream to cope with the increased number of simultaneous Programmes/developments

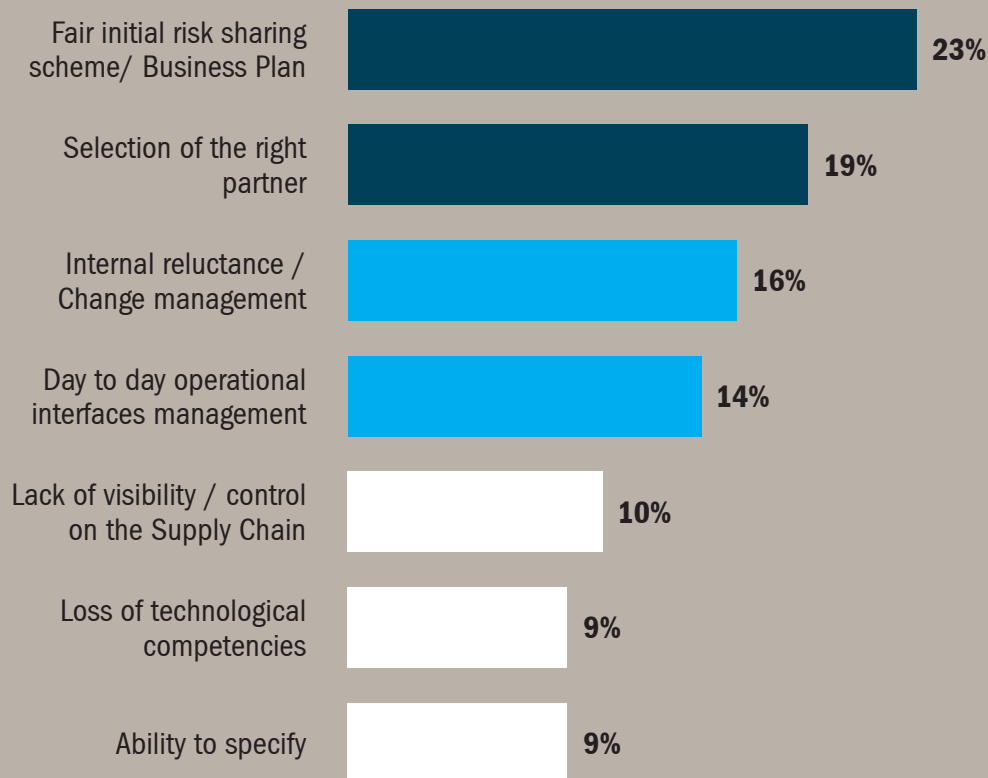
OEMs have set their focus on

- > Research (architecture and technologies)
- > Front- and back-end of the development cycle (upper part of the “V” development cycle): specification, integration, validation
- > Customer financing support
- > Services offering support

Once partners are selected there is a need to optimize operations between the 2 parties (JIP) and occasionally modify the way of working at the interface (NCM)

FIRST STEPS (FAIR INITIAL RISK SHARING SCHEME, SELECTION OF THE RIGHT PARTNER) APPEAR TO BE THE MOST DIFFICULT WHEN IMPLEMENTING NCMs

GREATEST DIFFICULTIES OF NEW COLLABORATIVE MODELS [% APPEARANCES AS MOST DIFFICULTY]



RATIONALE

Fair initial risk sharing scheme/BP appears to be the major difficulty during the implementation of New Collaborative Models:

- > Difficulty to set and contract prices based on very preliminary specifications (due to the early involvement / selection of suppliers)
- > Difficulty to set a fair scheme / BP with partners already involved in previous Programmes (management of different business models concurrently, potential lack of trust based on previous negotiations, ...)

The selection of the right partner also appears to be a major concern:

- > Limited number of candidates (e.g. partners imposed due to the nature of governmental contracts, few players with required capabilities)
- > Difficulty to evaluate candidates' proposals based on very preliminary specifications

An underlying lack of trust between partners contributes these difficulties

JOINT IMPROVEMENT PLANS (JIPs) HAVE BECOME KEY IMPROVEMENT LEVERS

EXAMPLES OF JOINT IMPROVEMENT ACTIONS

ENGINEERING

- > Joint development plateaus
- > Joint reviews (DMU, systems installation, ...)
- > Sharing of test or simulation resources (to test strategy / plans)

PROGRAMME MANAGEMENT

- > Alignment / optimization of interfaced organizations
- > Re-engineering of interfaced processes (e.g. configuration / alignment, non-conformities management, ...)
- > Implementation of shared steering tools (e.g. schedules, risks)

INDUSTRIAL / PROCUREMENT

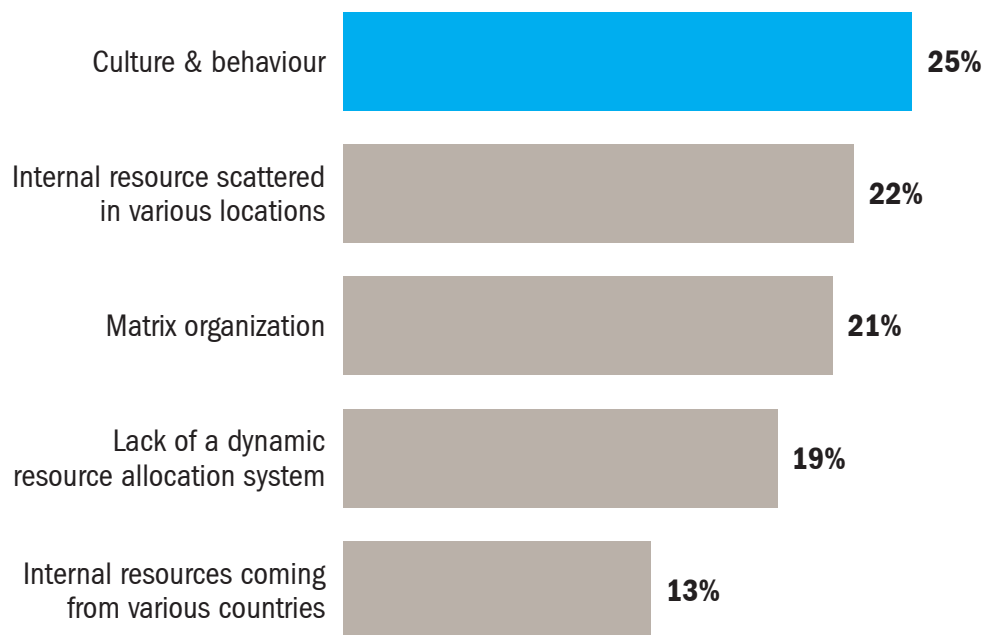
- > Joint analysis of root causes for quality issues
- > Sharing of production plans
- > Optimization of procurement plans (smoothing)
- > Optimization of logistic flows
- > Bundling of needs and joint negotiation with suppliers (e.g. raw material)
- > Improvement of the contractual structure

KEY ATTRIBUTES OF JOINT IMPROVEMENT PLANS

- > Senior management sponsorship from both companies
- > Symbolic acts to change mindsets and improve transparency
- > Balancing of internal action plans and projects at the interfaces
- > Win-win approach
- > Focus on a given development / product rather than generic approaches

PROGRAMME MANAGEMENT TEAMS HAVE TO DEAL WITH NUMEROUS ORGANIZATIONAL COMPLEXITIES – CULTURE & BEHAVIOUR APPEAR TO HAVE THE GREATEST IMPACT

ORGANIZATIONAL COMPLEXITIES WITH THE GREATEST IMPACT [% APPEARANCES AS GREATEST IMPACT]



RATIONALE

Complexities are mainly generated by

- > The Aerospace&Defense industry topology
 - Multinational companies / Programmes
 - Large and integrated companies following the 1998 - 2008 consolidation trend (mix of cultures)
- > The generalization of Project / Programme plateaus
- > The integration of external resources (early involvement of suppliers on joint development plateaus)
- > The involvement of companies in multiple programmes at the same time

Programme Management teams have to deal with the consequences

- > Lack of accountability leading to long decision-making processes, redundant positions, ...
- > National objectives in international groups (limited team spirit)
- > Complex interfaces with Risk Sharing Partners
 - Frequent escalation to Top Management / long decision-making process
 - Different methods of deployment (methods, process and tools)

NEW CHALLENGES FOR PROGRAMMES HAVE CAUSED AN EVOLUTION IN REQUIRED SKILLS / COMPETENCIES

MOST IMPORTANT SKILLS / COMPETENCIES FOR PROGRAMME MANAGERS [% APPEARANCES AS MOST IMPORTANT]



RATIONALE

New challenges for Programme Managers have caused an evolution in required skills / competencies

Former Programme Manager challenges included:

- > Delivery of the product focused on Time, Performance, Quality and Cost
- > Management of internal resources

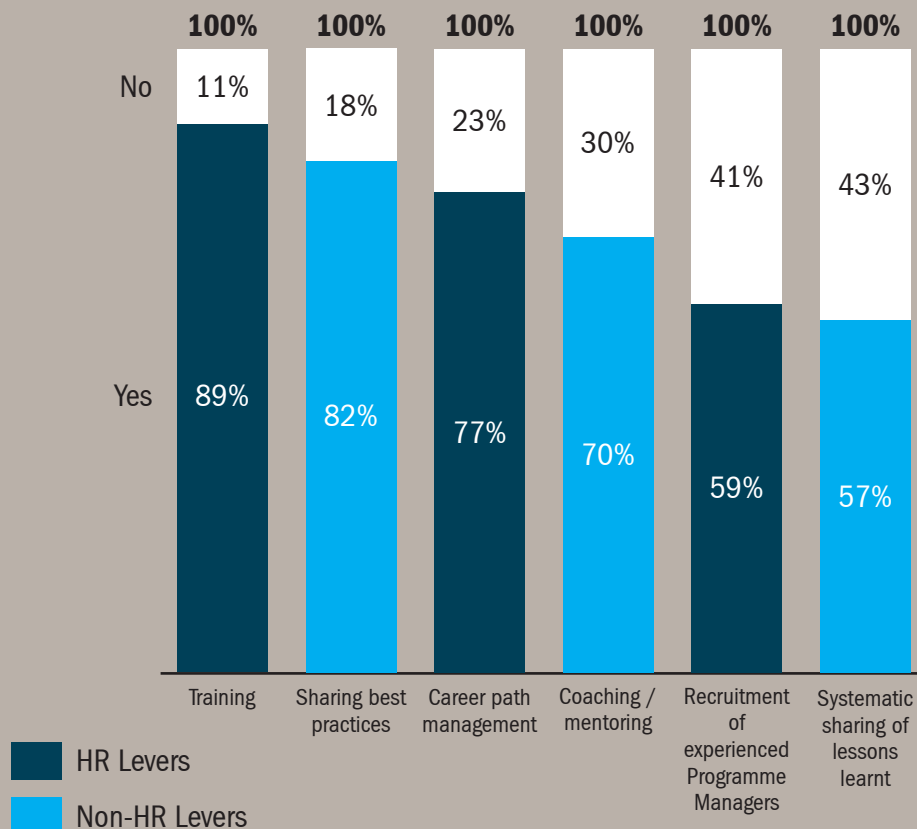
Today Programme Managers face additional challenges

- > Accountability for the Program business case
- > Significant involvement in Customer relationship management
- > Management of internal and external resources
 - Dedicated industrial organization (inc. selection of Risk Sharing Partners)
 - Multinational companies

These requirements often drive change within the company as new processes / methods / tools are tested and fine-tuned on current Programmes

BOTH HR AND NON-HR LEVERS ARE USED TO DEVELOP PROGRAMME MANAGEMENT COMPETENCIES

MOST FREQUENT LEVERS USED TO DEVELOP PROGRAMME MANAGEMENT COMPETENCIES [% ANSWERS]



Source: Roland Berger "Top Management Issues Radar 2010" survey

RATIONALE

HR as well as non-HR levers are used to develop Programme Management competencies

Other potential levers include

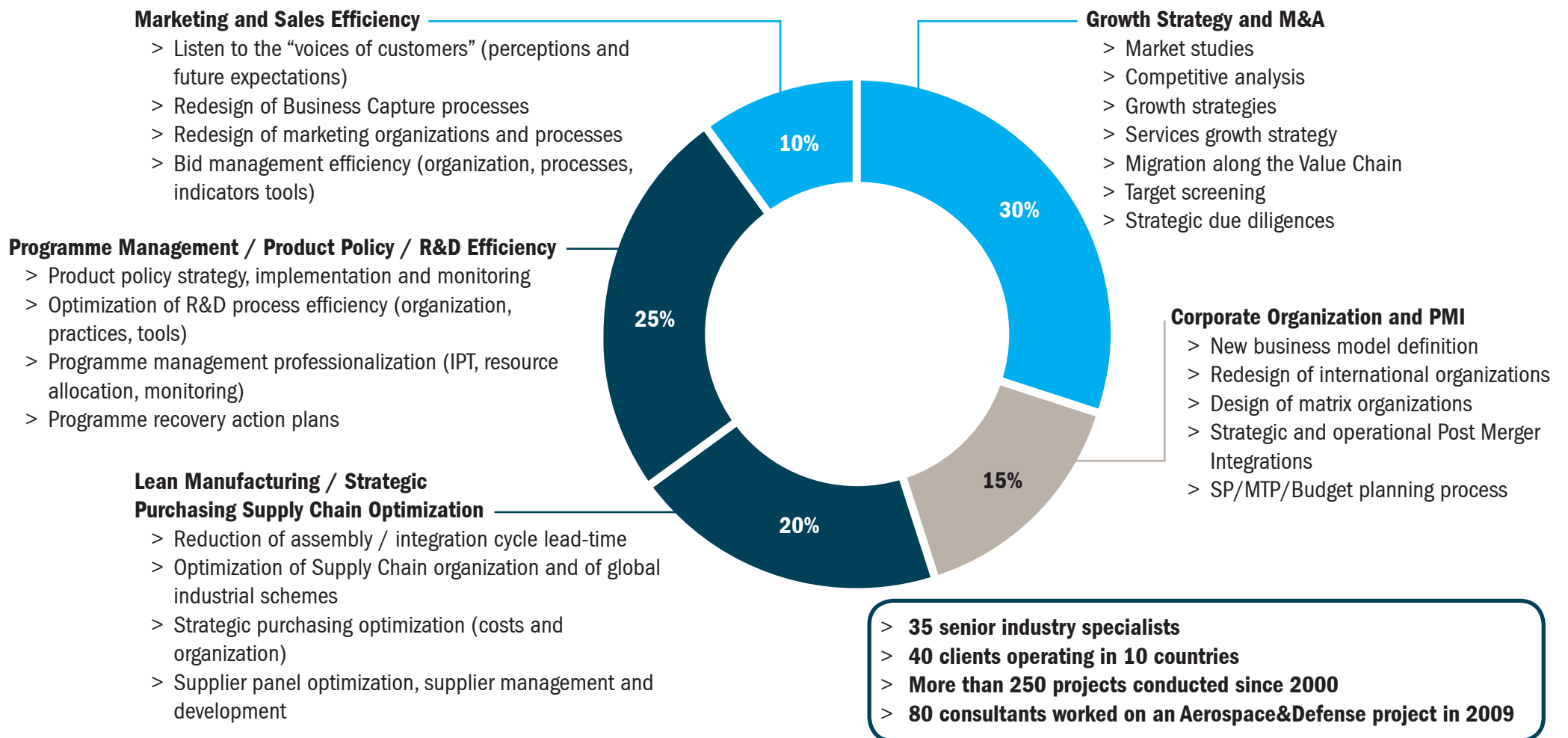
- > Incentives to retain leading talent
- > Specific forums to share best practices / strengthen the Project Management network
- > Selective staffing on project leadership teams to balance experiences (functional experiences, nature / type of previous developments, experiences at different stages of Programme Development / Production...)

Training should only be used to align teams on key processes, tools and set a common Programme "language"

Further levers to enhance competencies rely more heavily on improving exchanges of lessons learnt / experience

THE AEROSPACE&DEFENSE TEAM BENEFITS FROM COMPREHENSIVE INDUSTRY AND FUNCTIONAL EXPERIENCE THANKS TO 250+ PROJECTS CONDUCTED SO FAR

SPLIT OF PRACTICE TURNOVER BY TYPE OF PROJECTS



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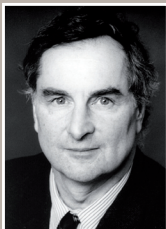
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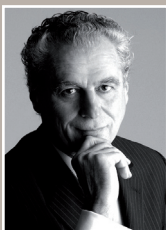
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