Global Transportation Industry Market Intelligence Capabilities

WRC PRESENTATION August 2025

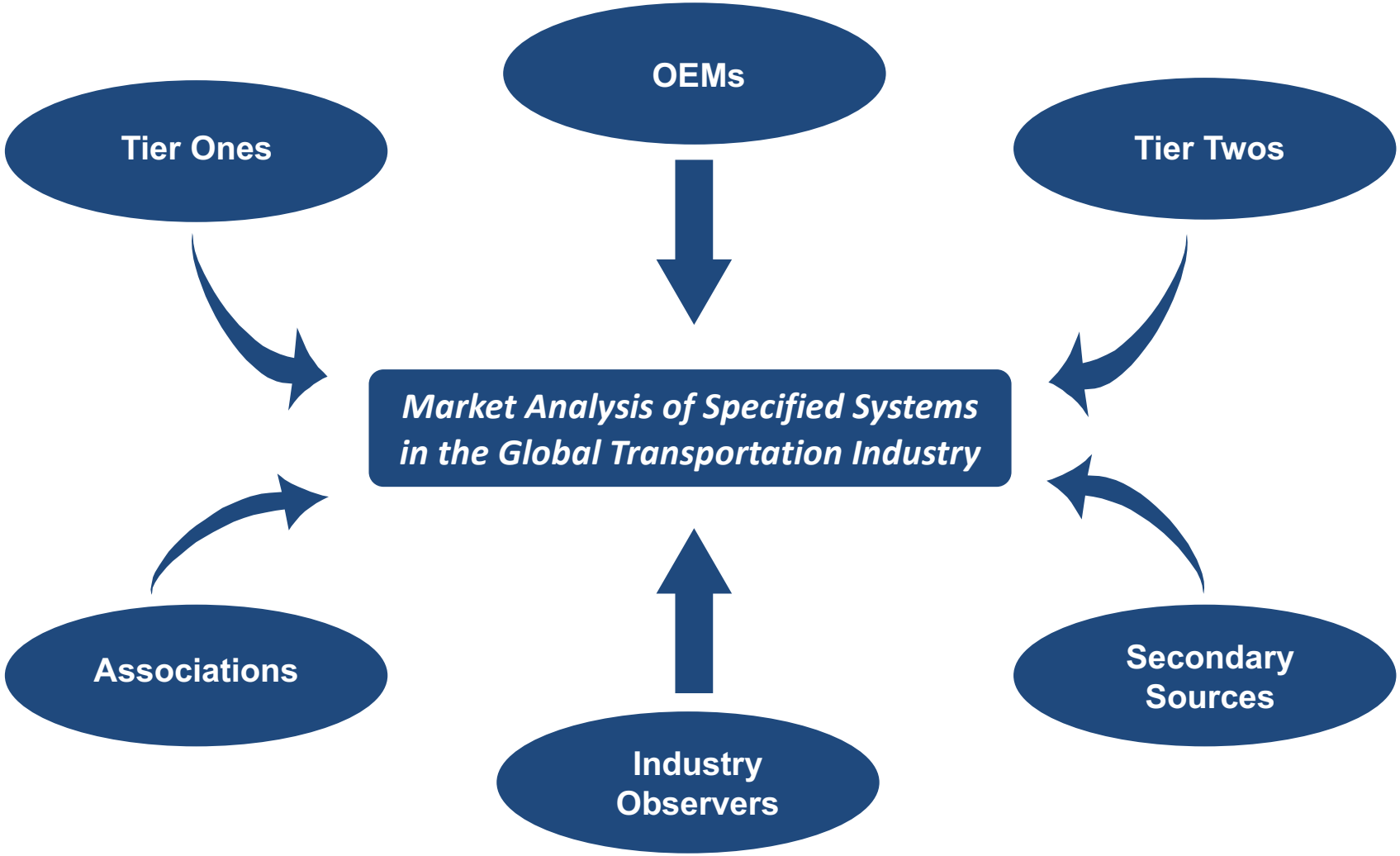
W | RESEARCH

INTRODUCTION

- W Research Company specializes in global, custom market intelligence projects on behalf of its clients.
    - W Research has a wide variety of clients that span the financial, manufacturing, and consulting industries. The company's main clients include tier one and tier two suppliers, private equity firms, banks, and management consulting firms.
- One of WRC's major areas of expertise is the global transportation industry, i.e. light vehicle/automotive, medium-and-heavy duty trucks/commercial vehicles, off-road/off-highway, the automotive aftermarket, etc.
- W Research's core value proposition is its ability to obtain difficult-to-get and up-to-date qualitative information and insight on behalf of our clients, and to analyze and present them in clear and actionable ways.
- WRC conducts its work in an anonymous manner and our client's identity and market relationships are carefully protected and vigorously maintained.
- Through this method, our clients receive the in-depth and up-to-the-minute market intelligence that they need to make better and more-informed decisions.
- In addition to its primary research methodology, the company brings significant automotive experience and analytical skills to every engagement. It works closely with its clients in order to support and augment their own internal analysis and market understanding.
    - WRC's team members have decades of experience in the global transportation and B-to-B market intelligence business.

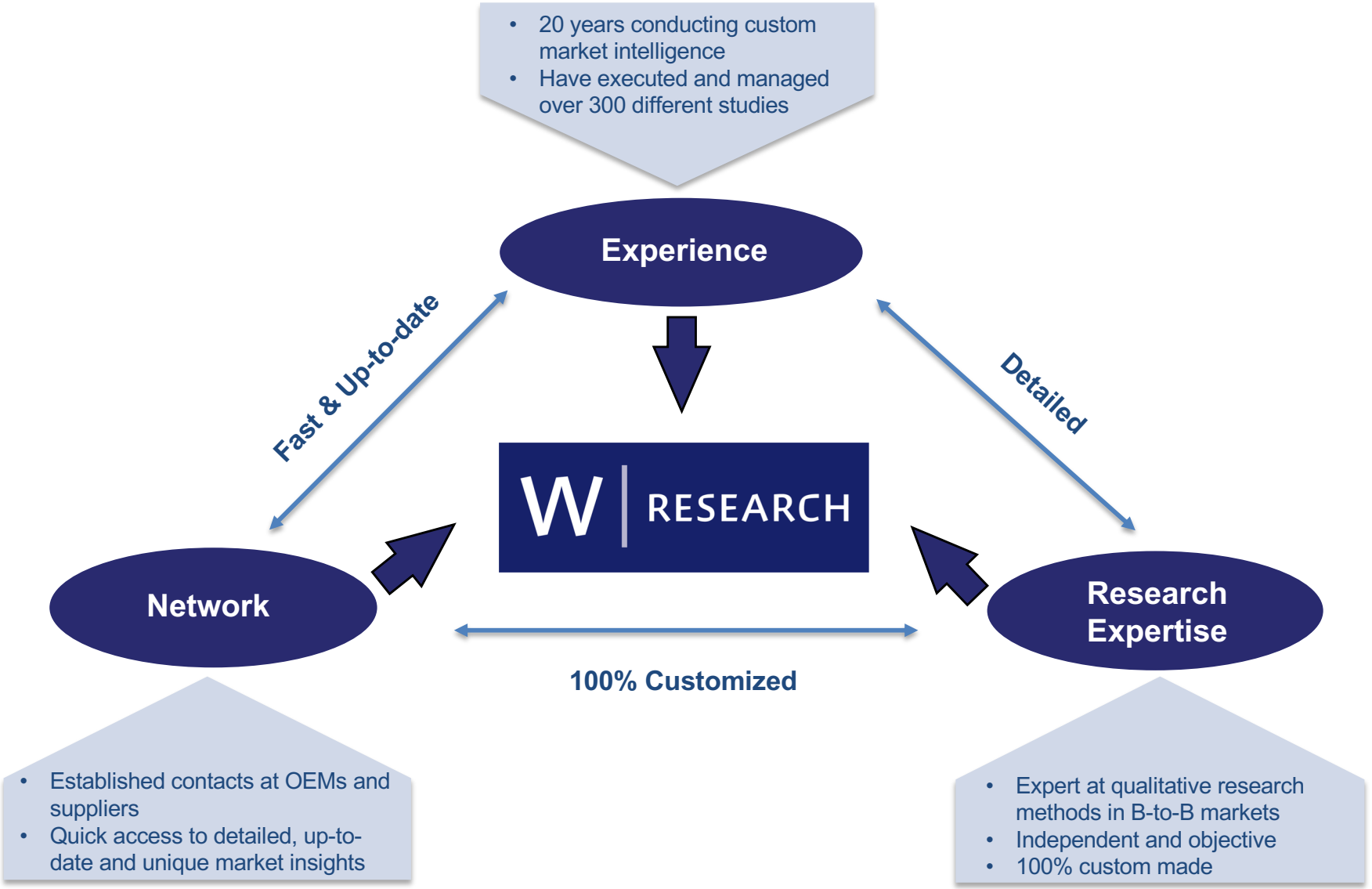
METHODOLOGY

WRC's key methodology is primary market research that includes talking directly to our client's customers, competitors, and supply-chain members in the market in order to obtain the required insights. Interviews are conducted over the phone or face-to-face.



VALUE PROPOSITION

WRC has been conducting custom market intelligence projects for over 20 years. WRC has a deep understanding of most vehicle systems and components, as well as industry dynamics and market structures.



SERVICE OFFERING

Service Type	Description	Examples of Clients
Market Due Diligence	Interview key customers and competitors to determine the candidate's current market position and future market potential	Banks/financial institutions and private equity firms
Market Assessment	An objective, qualitative study of the dynamics related to a system or component supplier's current and future market	Banks, private equity, management consulting and auto suppliers
Customer & Competitor Intelligence	Insight into a supplier's customer and competitor base, and an understanding of their future strategic intent	OEM and Auto suppliers
Market Size & Segmentation	Insight into a supplier's customer and competitor base, and an understanding of their future strategic intent	Auto suppliers, consulting, and financial groups
New Product Development	Assessing the market potential for a new and innovative product or technology based on in-depth customer interviews	Auto suppliers & technical consulting firms

Why use WRC?

EXAMPLE 1: AUTOMOTIVE STRATEGY

WRC's strategic market research services help to prioritize investment decisions and can also be used in negotiations with other stakeholders.

Project Type

Strategy

Industry

Automotive

Client Type

Automotive Tier 1 Supplier

Client

$15 - 20 billion

Project Scope

Europe & North America.

Project Duration

6 – 8 weeks

Initial Situation

- As part of a large M&A transaction, a client acquired a plant in Europe with a special metal transformation technology.
- As a result, the client needed to develop a strategy with regards to the future use of the technology & skills (divestment vs investment, make & buy, change in R&D focus, etc.).

Consulting Tasks

- Assess market opportunity based on technology usage & future potential for automotive applications in body-in-white, exterior, interior, and chassis
- Provide an analysis of the overall competing environment (competing suppliers & alternative technologies) and impact on business
- Engage in in-depth discussions with key players along the automotive value chain, with special focus on OEMs, tier 1 and machinery companies

Achievements

- W Research helped to make informed multi-million USD investment decisions.
- The market assessment was also an important basis for discussion with labor representatives / unions about potential lay-off of workforce.

EXAMPLE 2: AUTOMOTIVE MARKET DUE DILIGENCE

WRC supports its clients to better understand their target's markets, assess risks, as well as improve their bargaining power, especially when time-critical decisions have to be made.

Project Type

Market Due Diligence

Industry

Automotive

Client Type

Private Equity

Target Size

$500 - $1,000 Million

Project Scope

Europe & North America

Project Duration

4-6 weeks

Initial Situation

- A leading TPMS manufacturer was up for sale.
- Our client was already in advanced & exclusive negotiations with the seller.
- The transaction price was expected to be ~$700 Million (before market due diligence).

Consulting Tasks

- Review likely market development and associated opportunities & risks in North America & Europe
- Analyze OEM practices & trends with regards to future TPMS utilization
- Assess impact on aftermarket
- Provide market modeling & quantification of market size and likely revenue stream of acquisition target

Achievements

- W Research provided primary data that allowed our client to negotiate a reduction of the transaction price by ~$200 Million.

Examples of Service Offering
by
Systems & Components

SERVICE OFFERING 1/3

Systems	Components	Study Scope
Powertrain (Engine & Transmission)	• Blocks & Heads • Intakes & Exhaust • Oil pans • Con rods • Crankshafts • Other: Bed plates, Front covers, Trans cases, Shafts, Gears	• Market size & segmentation • Competitive analysis • OEM profiling • Material assessment • Forming process analysis
Driveline (Axles & Axle systems)	• Axles • Shafts • Diff gears, cases & carriers • CVJs • Drive shafts • Stab bars/links	• Competitive benchmarking • Aluminum penetration • Forging process analysis • Growth in Europe/S America
Chassis (Suspension, steering, brakes, wheels)	• Control arms & Steering knuckles • Advanced Steering systems • Struts/shocks • Subframe/cradles • Rotor/drum • Caliper, Steering gears • Other: Coil springs, R&P housing, I-shaft, Steering column, Column yoke, Wheels, Corner modules, Rubber-to-Metal bushings, Tires	• Importing from offshore • Market forecasting • Process segmentation • Competitive SWOT • Growth Strategies • Market entry strategies • Aftermarket analysis
Metals, Machining & Forming Processes	• Materials: Steel, Iron, Aluminum, Magnesium, Plastics • Forming processes: Forging, Casting (various), Stamping (hot, cold), Extrusion, Roll forming • CNC and finishing services	• Global growth analysis • Competitive benchmarking • New market assessment

SERVICE OFFERING 2/3

Systems	Components	Study Scope
Infotainment & Connectivity, Autonomous Driving	• Cockpit Electronics • Software • Navigation engine • Sensors (camera, radar) • On- & Off-board Connectivity technologies (cellular, wi-fi, DSRC) • Other: OTA, Cybersecurity, Middle layer stack, HMI, Navigation map data, MPUs/MCUs	• Market due diligence • Supplier strategy • Price analysis • Market forecasting • OEM Connectivity Strategy
Interior	• Cockpits/IP • Seats (structures, mechanisms, etc.) • Door trim • Other: Carpet, Headliners, Steering wheels, Door hardware and modules, Airbag systems	• OEM Strategy • Supplier strategy • Growth analysis • Market forecasting
Climate Control / TMS (Thermal Management System)	• EV related: Heat Pump, e-PTC, etc. • HVAC module • Condensers • Compressors • Other: Ducts, Tubing, Reservoirs, Radiators, Filters, Scrolls	• Market assessment • Competitive benchmarking • Aluminum penetration • Process possibilities • Offshore sourcing
Other	• E&E architectures: Wiring harnesses, Junction boxes, ECU • Engineering Services • Hybrid technology • Exhaust system • Body-in-white / Structural parts • Other: Closure panels, Head lamps, Wiper blades, Tire pressure monitors (TPMS), AIS (Air Induction Systems), Exterior painting & coating	• Growth potential • New technology analysis • Market forecasting • Competitive SWOT • OEM Entry strategies • OEM Design strategies • OEM Outsourcing strategies

SERVICE OFFERING 3/3

Systems	Components	Study Scope
Medium & Heavy Duty Truck	• Blocks • Heads • Intakes • Front Covers • K Rods • Chassis frames • Hybrid systems	• OEM Strategy • Supplier strategy • Growth analysis • Market forecasting
Aftermarket	• Batteries • Wiper blades • Oil • Wheels • Specialty chemicals • Brake components	• Competitive benchmarking • Aluminum penetration • Process possibilities • Offshore sourcing
Agricultural, Construction, & General Industrial	• Engine components • Chassis parts • Control arms • Knuckles • Hybrid technology • Batteries • Industrial fasteners • Wind turbine generators	• Growth potential • New technology analysis • Market forecasting • Competitive SWOT • OEM Entry strategies

RECENT STUDY EXAMPLES

- Global market assessment of an automotive seating manufacturer
- Global market assessment of an automotive cockpit electronics supplier and its market
- Market quantification and outlook for roll forming in the global automotive industry
- Assessment and forecast of engineering plastic components for specified systems in the N. American automotive industry
- Market quantification and outlook for magnesium castings in the European automotive industry
- Market outlook for specified aluminum casting components in the N. American automotive industry
- Market outlook for connectivity technologies in the N. American and European automotive industry
- Market quantification and outlook for the software middle-layers in embedded navigation systems in the global automotive Industry
- Forecast and analysis of embedded navigation systems and the navigation map database market in the global automotive industry
- Market due diligence and assessment of camera sensor suppliers for advanced driver assistance systems in the global automotive industry
- Future market strategy and outlook for electrical distribution systems and E/E architectures in the global automotive industry
- Market forecast of hybrid engine technology for commercial vehicles in North America
- Analysis of specified powertrain components in the global automotive industry
- Market potential assessment of aluminum casting technology in the N. American & European automotive industries

Examples of
Recent Study Deliverables

EXAMPLE: MARKET OVERVIEW

European & North American xx Markets

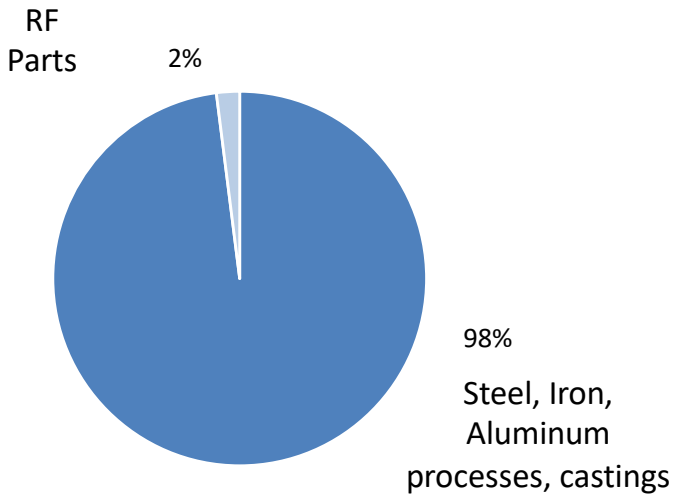
20xx	Body-in-White	Exterior	Interior	Chassis
Market Size	Europe: **$xx Million** N. America: **$xx Million**	Europe: **$xx Million** N. America: **$xx Million**	Europe: **$xx Million** N. America: **$xx Million**	Europe: **not applicable** N. America: **$xx Million**
Future Outlook for xx	• Growth exists in rocker panel reinforcements; • xx bumper beams are expected to decline due to the switch to aluminum.	• Several traditional xx parts are expected to decline slightly and be replaced by conventional stamping.	• Many traditional parts will be replaced by stamping and therefore, decline; • Limited opportunities exists in certain vehicle segments, (vans, full-sized SUVs).	• Growth opportunities exist, but only for full-sized pick-ups & SUVs in North America.
Key Applications	• Rocker panel reinforcement • Bumper beam reinforcement • Roof bows	• Side impact beam, • Window glass channels & regulators • Roof racks • Door sliding tracks • Sunroof tracks & channels	• Seat tracks & rails • Rear seat frame sections	• Ladder frame rails and cross-members for full-sized pick-ups & SUVs in North America
Key Customers	OEMs, tier 1s in charge of rocker panel & bumper beam assembly	OEMs, tier 1 in charge of door assembly and sunroof manufacturers	Tier 1 seat manufacturers	OEMs, tier 1 in charge of ladder-frame parts or systems
Key Suppliers	Shape, Magna, Linde + Wiemann, etc..	Dura, Shape, Magna, Gestamp, Welser Profile, xx	X in-house, Brose in-house, Magna in-house, Dura, xx	Ford in-house, Metalsa, Tower Automotive
Main competing technologies	• Cold stamping • Hot forming • Hydroforming • Aluminum extrusions	• Cold stamping • (Hot forming) • (Aluminum extrusions) • (Plastics injection molding)	• Cold stamping	• Hydroforming • Cold stamping

EXAMPLE: MARKET OVERVIEW

xx is an established technology in the automotive industry. However, it is confined to a limited number of applications and shapes and therefore represents a small share of the market.

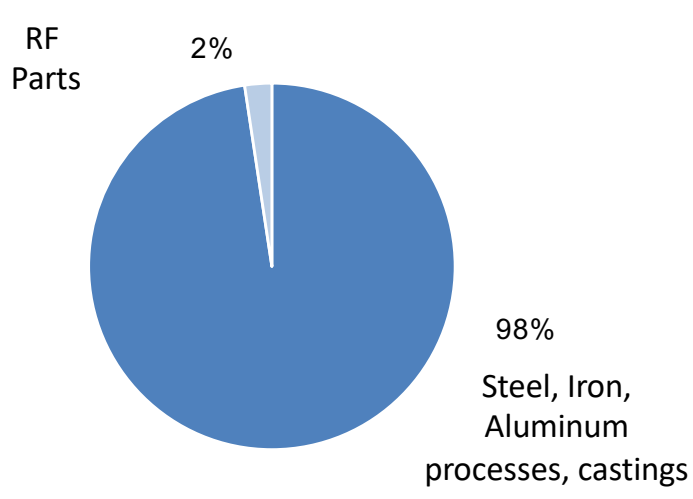
xx's Est. Market Share vs. Other Metal Forming Processes Per Vehicle (20xx)

Europe



Per Vehicle*:	
•Av. Total Vehicle Weight:	1,500kg
•Av. Total Metal Weight:	1,100kg
•Av. xx Component Weight:	**21kg**
•Max # of xx components:	up to 60
•Av. Total # of xx components:	**15 – 20**
•Av. Total Value of xx components:	**$xx**

North America



Per Vehicle*:	
•Av. Total Vehicle Weight:	1,800kg
•Av. Total Metal Weight:	1,300kg
•Av. Xx Component Weight:	**30kg**
•Max # of xx components:	up to 70
•Av. Total # of xx components:	**20 – 25**
•Av. Total Value of xx components:	**$xx**

Source: Interviews and analysis. Includes ladder-frame parts for pick-up trucks & SUVs in N. America (not applicable in Europe), but no commercial or heavy-duty trucks. 'xx parts' do not include standard, tubular parts.

EXAMPLE: MARKET OVERVIEW

xx benefits from several advantages in terms of cost efficiency and production flexibility, but is not suitable for parts featuring complex geometries. This is a determining weakness that leads many OEMs to choose conventional stamping solutions for BIW applications.

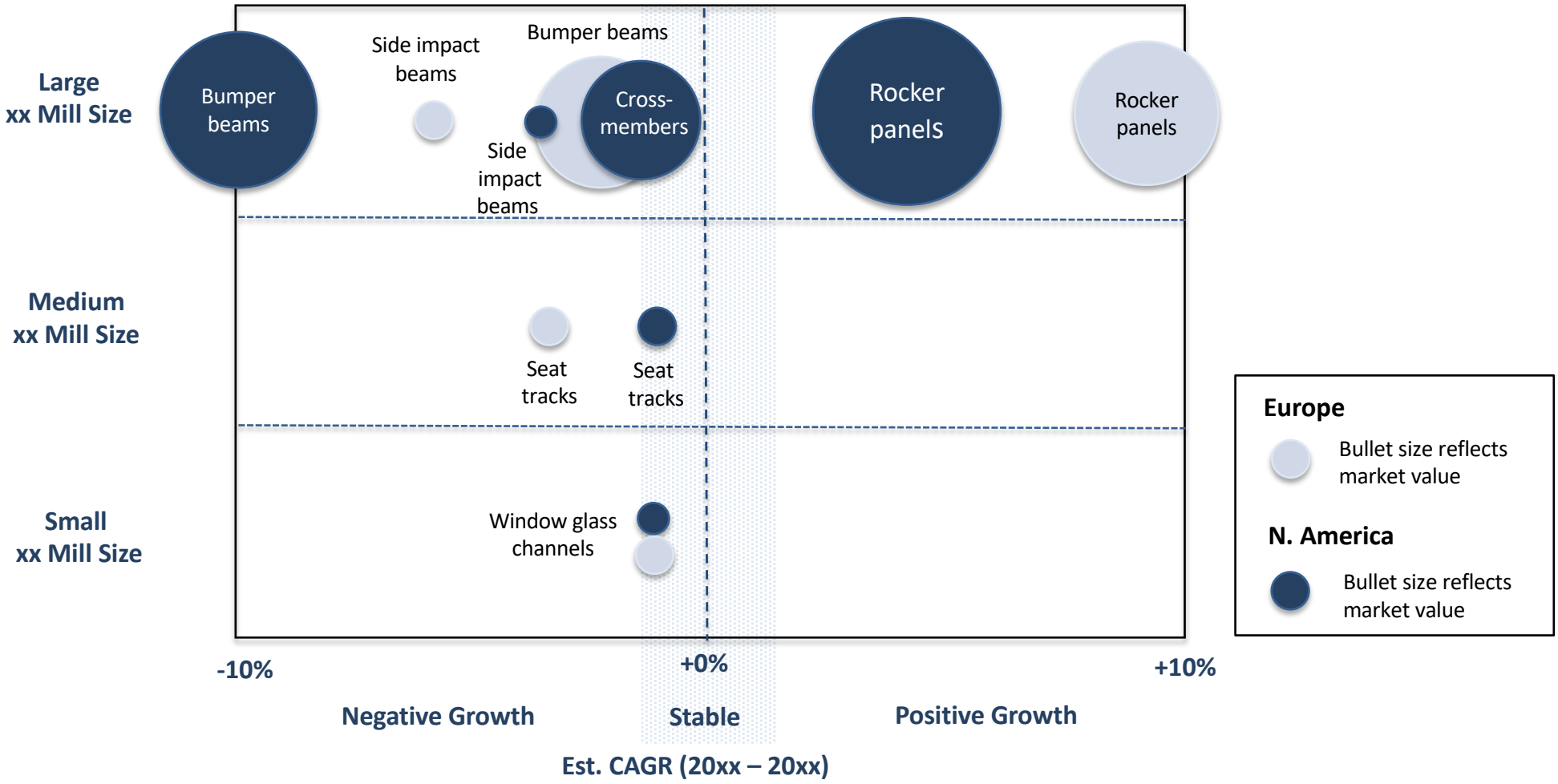
Strength Weakness

Factor	Cold Stamping	Hot Forming	Aluminum Extrusions	xx
Cost Efficiency	+++	-	+	+++
Suitability for Long Parts	-	-	+++	+++
Suitable for High Strength Alloys	+	+++	-	+++
Suitability for High-Volume parts	+++	+++	+++	+++
Suitability for Low-Volume parts	--	--	+++	+++
Tool Wear	-	-	+++	+++
Comfort Level of OEMs and Tier1s	+++	+++	++	++
Level of Investments Costs	-	---	+	+
Suitable for Tight Tolerance parts	+++	+++	+	-
Suitability for Complex Geometry parts	+++	+++	-	---

EXAMPLE: MARKET OVERVIEW

The primary xx applications require large xx mills. However, each mill is designed for specific product lines, while line changes require additional investment. European xx suppliers favor more flexible and modular mills than their N. American counterparts.

Key xx part Market Value, Market Growth and xx Mill Size



Source: Interviews and analysis. Includes ladder-frame parts for pick-up trucks & SUVs in N. America (not applicable in Europe), but no commercial or heavy-duty trucks. 'xx parts' do not include standard, tubular parts.

EXAMPLE: MARKET OVERVIEW

XX's core products vary significantly by system, value per vehicle, and process. Its market share and ranking are the highest in HVAC and Fluid reservoirs, reflecting the smaller size of these markets, their level of blow-molding, and the limited level of competition.

Products	Share of XX's 20xx Revenue	Average Value / Vehicle	Relevant Process	Est. Market size		XX Market Share 20xx	XX Market Rank 20xx
				20xx	20xx		
Interior Systems	xx%	$184	Injection	$xx billion	$xx billion	xx%	xx
HVAC Distribution System	xx%	$30	Blow	$xx million	$xx million	xx%	xx
Air Induction System	xx%	$25	Blow & Injection	$xx million	$xx million	x%	xx
Fluid Reservoirs	x%	$10	Blow & Injection	$x million	$xx million	xx%	xx
Total	***xx%***	***$ 249***		***$ 4.4 billion***	***$4.7 billion***		

EXAMPLE: MARKET OVERVIEW

Based on the data, a number of variables impact xx's competitiveness in the systems under study, including the size of the market, its use of blow molding vs. injection molding, and the level of competition.

High Low

Products	Market Size	Market Growth	Use of Injection Molding	Use of Blow Molding	Level of Competition	XX Market Potential	Comments
Interiors	High	Low	High	Low	High		While interior trim represents xx's largest business, it's a niche player and will increasingly compete with the global tier ones.
HVAC Distribution	Medium	Medium	Low	High	Low		This is a key market and its value is likely to grow due to the use of lightweight blow molding & foam technology moving forward.
Air Induction System	Medium	Medium	Medium	Medium	Medium		AIS is relevant in market size and offers relevant growth, but xx will need to find a solution for OEM global sourcing requirements.
Fluid Reservoirs	Low	Low	Medium	Medium	Medium		Fluid reservoirs are commoditized more than the others, but they use blow-molding and xx is a player.

Source: WRC interviews and analysis

EXAMPLE: MARKET OVERVIEW

In addition to the previous variables, a number of other market factors impact xx's competiveness in the systems under study. These include global footprint, barriers to entry, and level of profitability.

High Low

Factor	Interiors	HVAC Distribution System	Air Induction System	Fluid Reservoirs
Global Footprint Requirements	Low	Low	High	Medium
Level of Competitive Fragmentation	High	Low	Medium	Low
Barriers to Entry	Medium	Medium	High	Low
Level of Commoditization	High	Medium	Medium	High
Level of Tier One Vertical-Integration	High	Low	Medium	Low
Level of Expected Profit Margins	Low	Medium	High	Low
Market Growth Potential Based on Introducing New Products	Low	Low	High	Low
Expected Market Evolution Based on New Technology or Process Developments	Low	High	Medium	Low

EXAMPLE: MARKET OVERVIEW



- Instrument Clusters (IC) were originally developed to inform the driver about the status of his vehicle (OBD HMI), provide aspects related to driving (navigation, etc.) and to assist in keeping drivers' eyes and attention on the road. Some of these functions are mandated and safety/security relevant. Therefore ICs are traditionally not seen to be pure commodities.
- The indicators commonly found in a passenger car's IC are :
  - Speedometer, tachometer, odometer, fuel gauge, check engine light, coolant temperature gauge, gear shift position, seat belt warning, oil pressure gauge and tire pressure monitoring system.
- In recent decades, the IC has seen an increase in hybrid indicators (TFT-screens, although electronic solutions already existed in the 80s/90s), and is now shifting towards fully digital, consumer electronics-like displays (although usually not touch-screen).
  - The size of the IC display is seen to be limited by the size of the steering wheel, and unlikely to become larger than 10-12". Larger displays such as the "Surfboard" for the Mercedes EQC consists of two smaller displays with one large glass deck bonded on top to the two panels.

EXAMPLE: MARKET OVERVIEW

The consolidation and integration of displays is also an important trend in cockpit electronics and likely to impact the Instrument Cluster (IC) supply-chain.

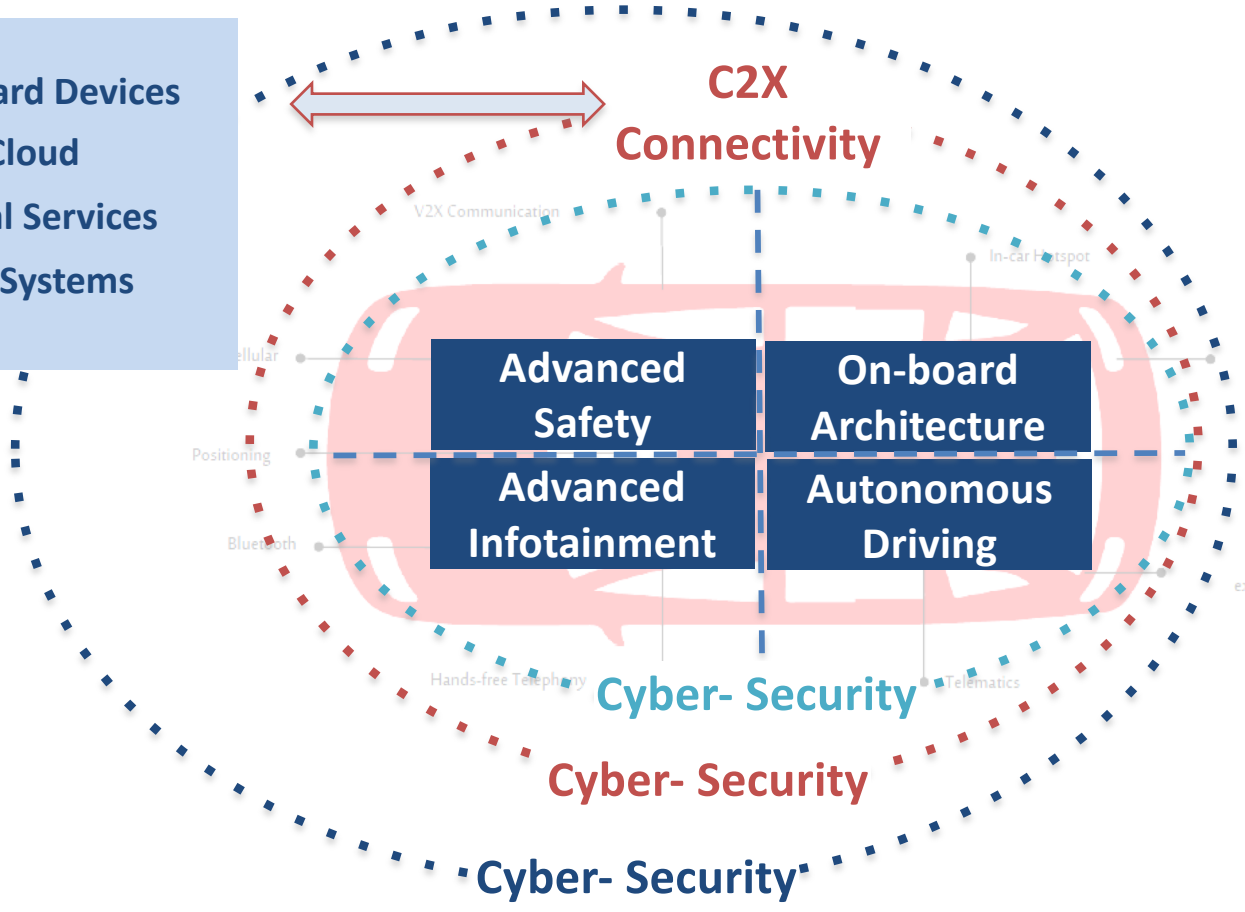
- As long as Instrument Clusters (IC) were analog or hybrid equipment, it was not conceivable to replace them. With the newer SoC solutions, and the option of using domain controllers, the relevance of a ”smart” IC has decreased, and respondents see the IC likely becoming a dumb “screen” with a remote intelligence (e.g. graphics processing unit (GPU)) and the control consolidated elsewhere.
  - OEMs expect to reduce costs and achieve weight and space savings in the process. In addition, they also expect to use the same display globally vs. having to customize the hardware for the various regions where its cars are offered.
    - According to Nippon Seiki, a BMW Mini today has more then 200 different IC variants depending on the sales region. A SW enabled graphic display customization is therefore perceived to be a more cost and time efficient solution.
  - Moreover, ICs, that used to be commodities imposed in cars by mandates, have become much more dynamic and differentiating areas used by OEMs in their advertising to promote their brand (Audi Digital Cockpit, etc.).
- The digital shift and Software enabled virtualization are likely to impact the IC supply-chain that has been traditionally less crowded than the Infotainment sector and increase the pressure on the Tier ones’ margin in this field.
- Some OEMs like Tesla (Model 3) and the German OEMs, are requesting proposals for “IC-less” cockpits with only a center stack and a HUD, and no IC per se. This could be a major mid-to-long-term challenge for IC suppliers that are not well-positioned in HUD.
  - The ”IC-less” design is often related to EV vehicles and/or Autonomous Driving.

EXAMPLE: MARKET OVERVIEW

In addition to learning to power-share with other industries, the OEMs are also learning to create their own cyber-eco-system services, regularly improve their product via software updates, move from a "ship and forget" mentality to a "ship and remember" organization, and deal with the new frontier of cyber security.

Overview of the Multiple Dimensions to the Connected Car

Off-board Devices
Cloud
Digital Services
Eco-Systems



The car is no longer an island. It is becoming integrated into a broader universe and is connected to the IT world and its challenges.

It will benefit from this connection and access more advanced and real-time data networks, enabling new functions that will help to maintain automotive relevance.

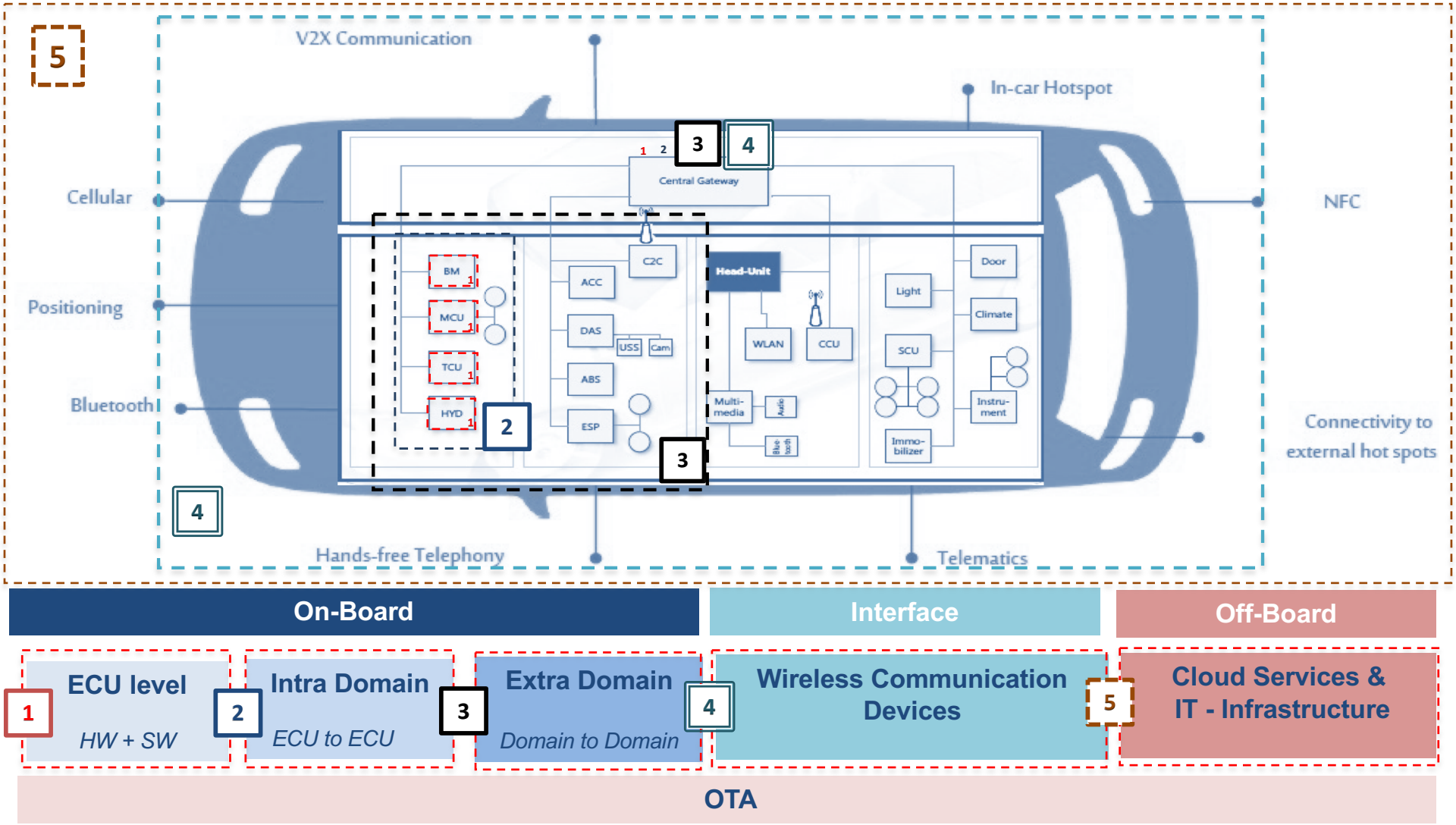
At the same time, it creates increased vehicle vulnerability to external threats and the need for enhanced cyber-security measures to deter as many hackers and other threats as possible.

Source: WRC interviews and analysis

EXAMPLE: MARKET OVERVIEW

Security is considered to be a continuous process to build up and maintain a multi-layered defense against threats, involving both hardware and software.

Overview of the 5 Cyber Security Layers



Source: WRC Interviews and analysis.

EXAMPLE: MARKET OVERVIEW

Products, Services & Key Players

The cyber security market is complex and consists of a number of products, services, and key suppliers.

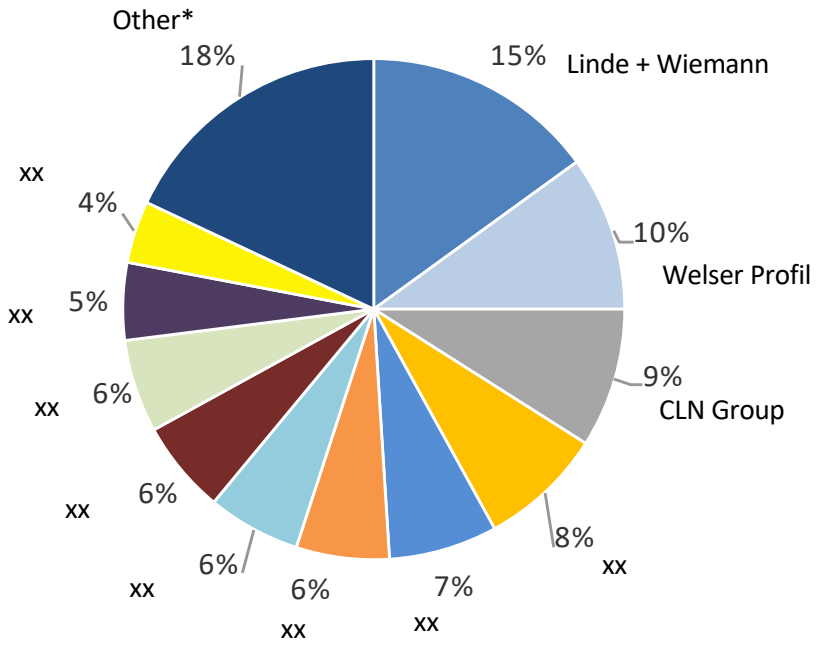
	IT Security Products & Services	Examples of Key Players	Comments
PRODUCTS	Firewall	Arilou Technologies, Secunet	Data transfer monitoring in order to assess which data packages are allowed to pass; does not prevent network attacks, but blocks attempts to send prohibited messages by the devices on the network.
	Intrusion Detection & Prevention Services (IDS/IPS)	Secunet, Argus Cyber Security, McAfee, Symantec, TowerSec, Security Innovation	Detection of ECU and/or network attacks (denial-of-service, man-in-the-middle, application-layer attack, etc.).
	Virtual Machines (Hypervisor)	QNX, Redbend, Cisco, Green Hills, Wind River, OpenSynergy, Sysgo	Virtualization to isolate different operating and application systems.
	On-chip Security Engine	Intel, ARM, Texas Instruments, Infineon, NXP/Freescale, etc.	Non-programmable Secure Hardware Extension (SHE) and cryptographic accelerators.
	Hardware Security Module	Bosch, Utimaco, Gemalto, Giesecke-Devrient, Oberthur, Cryptovision, Synopsis	Additional on-chip core or external hardware-based security engine (e.g. smart cards, security IC, TPM), which is (partly) programmable; dedicated security controller that encapsulates a variety of security mechanisms.
	OTA	Redbend, Movimento, Arynga, Bosch	Over-the-air update software needs to deal with a variety of IT security solutions across all relevant levels.
	ECU software & security tool development	Elektrobit, Vektor	These are not IT security experts, but will develop IT security solution expertise due to impact on their tool development.
SERVICES	Security Concept Consulting	EY, CapGemini, PWC, Accenture, ATOS, Secunet, Security Innovation, Cybercom, CGI Group	Overall security concept development and review (with regards to hardware and software), security and risk assessment, specification sheet development, security policy development, etc.
	ECU programmig and testing	Tier 1 & 3rd parties, such as KPIT, Silver Atena, ICS, Easycore, Infosys, Tata Consulting, Tech Mahindra, etc.	ECU programming and integration of IT security software at the ECU level.
	Penetration Testing	Sogeti(CapGemini), P3 Group, BT Global Services, Tech Mahindra, Cybercom, Arilou, Cold Fire, and SWRI, Wipro	Actual testing of security solutions by white hat hackers (may vary depending on the target security level and system / component).
	IT Security Solutions Consulting & R&D	Arilou Technologies, Security Innovation, Galois, Kaprika Security, Olympus Sky, Rohde & Schwarz (Sirrix)	With special focus on functional and IT security of ECUs or general core R&D on IT security (encryption & authentication algorithms).
	Off-board IT Security Services	BT, T-Systems, IBM, Cisco, Intel, etc.	Ongoing monitoring of IT-security solutions reports and alerts for remote monitoring of a vehicle's cyber health.
	Remote diagnostics services and testing equipment	Softing	Development and supply of remote diagnostics equipment (which also requires integration of IT security measures) .

EXAMPLE: COMPETITIVE ENVIRONMENT

In both regions under study, the automotive xx market is highly fragmented and only a few players have relevant market shares in both regions.

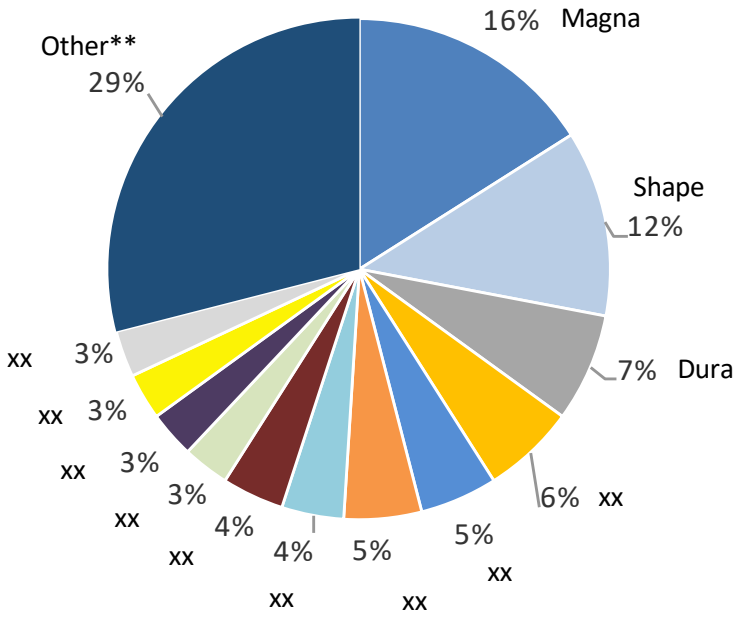
Key Players

Europe



Total Market Size in 20xx = $xx Million

North America



Total Market Size in 20xx = $xx Million

Source: Interviews and analysis.

EXAMPLE: COMPETITIVE ENVIRONMENT

Summary of Key Players for AIS, HVAC Systems and Fluid Reservoirs

Company	Est. Annual Revenue	Ownership	HVAC	AIS	Fluid Reservoirs	Current Key customers	Est. Capacity Utilization
ABC Group	**$1.2 billion**	Private (xx)	**xx%**	**xx%**	**xx%**	Detroit 3, Toyota	**xx%**
xx	**$320 million**	Private (xx)	**xx%**	**xx%**	**xx%**	Detroit 3, Honda	**xx%**
xx	**$500 million**	Public	**xx%**	**xx%**	**xx%**	Japanese OEMs	**xx%**
Denso	**$40 billion**	Public (with Toyota as major stockholder)	**xx%**	**xx%**	**xx%**	Toyota, GM	**xx%**
xx	**$90 million**	Private (xx)	**xx%**	**xx%**	**xx%**	Detroit 3	**xx%**
xx	**$130 million**	Private (family)	**xx%**	**xx%**	**xx%**	German OEMs, Nissan	**xx%**
xx	**$200 million**	Private (family)	**xx%**	**xx%**	**xx%**	GM	**xx%**
Mann+Hummel	**$4.0 billion**	Private (family)	**xx%**	**xx%**	**xx%**	All OEMs	**xx%**
Mahle	**$12 billion**	Incorporated foundation	**xx%**	**xx%**	**xx%**	All OEMs, except Ford	**xx%**
xx	**$70 million**	Private (family)	**xx%**	**xx%**	**xx%**	Detroit 3	**xx%**
xx	**$100 million**	Private (family)	**xx%**	**xx%**	**xx%**	Japanese OEMs	**xx%**
xx	**$680 million**	Private (mainly by Honda)	**xx%**	**xx%**	**xx%**	Honda, Nissan	**xx%**
xx	**$45 million**	Private (family)	**xx%**	**xx%**	**xx%**	German OEMs, Honda	**xx%**

EXAMPLE: COMPETITIVE ENVIRONMENT

xx Group

Metric	Market Input & Assessment
Ownership:	• Private. xx acquired xx in July 2016 from the Schmidt family out of Canada.
Estimated Annual Revenue:	• Group total worldwide is approx. $1.2 billion, with about $850 million in blow & $350 million in injection. • Perceived as the largest blow-molder in N. America with approx. 75% of sales being N. America-based.
Global Headquarters:	• Global HQ is in Toronto, Canada. • xx has 26 North American plants (17 blow-molding; 9 injection-molding) in Canada, the US and Mexico. • It also has plants in Europe, Brazil and China, as well as some JVs with INOAC, YAPP, etc.
Total Employees:	• The company has approx. 6,000 employees worldwide, with about 75% being in North America.
Key Industries:	• Approx. 95% of the company's sales are in the automotive industry.
Key Products:	• Its key products include AIS, fluid reservoirs (washer systems), HVAC ducts, exterior parts (spoilers and running boards), interior parts (IP, consoles, panels, etc.), as well as suspension components (CVJ boot).
Key Customers:	• The Detroit 3 are xx's largest customers (GM is the single largest customer overall). It also has a relevant presence at Toyota and Nissan. But the recent acquisition by xx could be a negative at OEM X and OEM Z.
Capacity utilization:	• xx's plants are said to be running at a high capacity utilization rate right now, est. at around 90% for blow-molding and 80% for injection, although its future business at OEM X OEM Z is currently on hold.
W Research Assessment:	• xx is the single largest player, particularly for blow-molding. It's significantly larger and more global than XX and even builds its own molds and blow-molding machines. • xx's current issues with the Detroit 3 could potentially benefit other players. However, the exchange rate fluctuations between the USD and CAD over the past few years have not favored xx since it sources its raw materials from the US. • The acquisition by xx has many of its customers wondering about the company's future. In addition, xx generated negative feelings in the industry after their exit from OEM X several years ago.

EXAMPLE: COMPETITIVE ENVIRONMENT

Company SWOT analysis

Strengths

- xx has considerable experience with xx and has developed some solutions with regards to xx.
- It has a proven track record within the auto industry and is capable of supplying large volumes.
- It also has specific expertise regarding the xx of AHSS/UHSS and has experience with some Body-In-White parts, which is the largest market for xx.

Weaknesses

- Outside of its existing customer base of OEM A and OEM B, xx is relatively unknown as a xx player in Europe.
- With a market share of xx%, xx is a very small player in the EU xx market and may have limited resources to compete directly with the other xx specialists.

Opportunities

- It could benefit the company to leverage its xx expertise on behalf of xx and identify potential applications for the company across its product portfolio. But this would also require xx's design team to become better familiar with xx.
- Outside of xx's core automotive business, rocker panel reinforcements offer the highest growth potential in both NA and EU.

Threats

- The large and fragmented number of competitors, including xx specialists and General Metal Forming companies, will make it difficult for the company to fundamentally grow in both the EU and NA, particularly given that both markets are expected to gradually decrease in the future.

EXAMPLE: COMPETITIVE ENVIRONMENT

Verbatim Comments Regarding XX

"xx is a smaller company, but they've grown steadily over the years. They do a fantastic job and are a confident company. They do some assembly, but that's not their core. They do their own tooling and really focus on supplying quality parts."

VP Engineering, Tier One

"xx's been around forever and is good in both blow-molding and injection-molding. I think there was a time when Ford reserved all of xx's blow-molding capacity in order to lock it down, but that was years ago. Overall, xx is a well-run company. I have a lot of respect for those guys because they have the discipline and business acumen that you need in the auto industry. You could call them too conservative, but that's not necessarily a bad thing in the auto industry."

VP Purchasing, Tier One

"xx is a good company. They've supplied us for a long time and can be a tier one, but they didn't make our Top 4 bid list. They're not big enough and offer us no global capabilities."

Release Engineer, AIS, OEM A

"xx is really well positioned to take some of xx's business in the future. They are known for their operational excellence, have capacity and no financial problems. Additionally, their CEO, Mr X, is known to be a real hard-ass, which is good."

VP Sales, Competitor

"AA Industries sold BB Industries to xx because of the relatively low margins in the HVAC duct business. Right after the sale, AA acquired another blow molding company with more satisfying margins."

VP Sales, Competitor

"xx is in the interior business only because they acquired some of xx's business. For blow molders who are mainly active in the space of under-the-hood components and HVAC ducts, it is a challenge to grow in their traditional space. This is why xx decided to grow by acquiring a company outside of their traditional business."

Sales Manager, Competitor

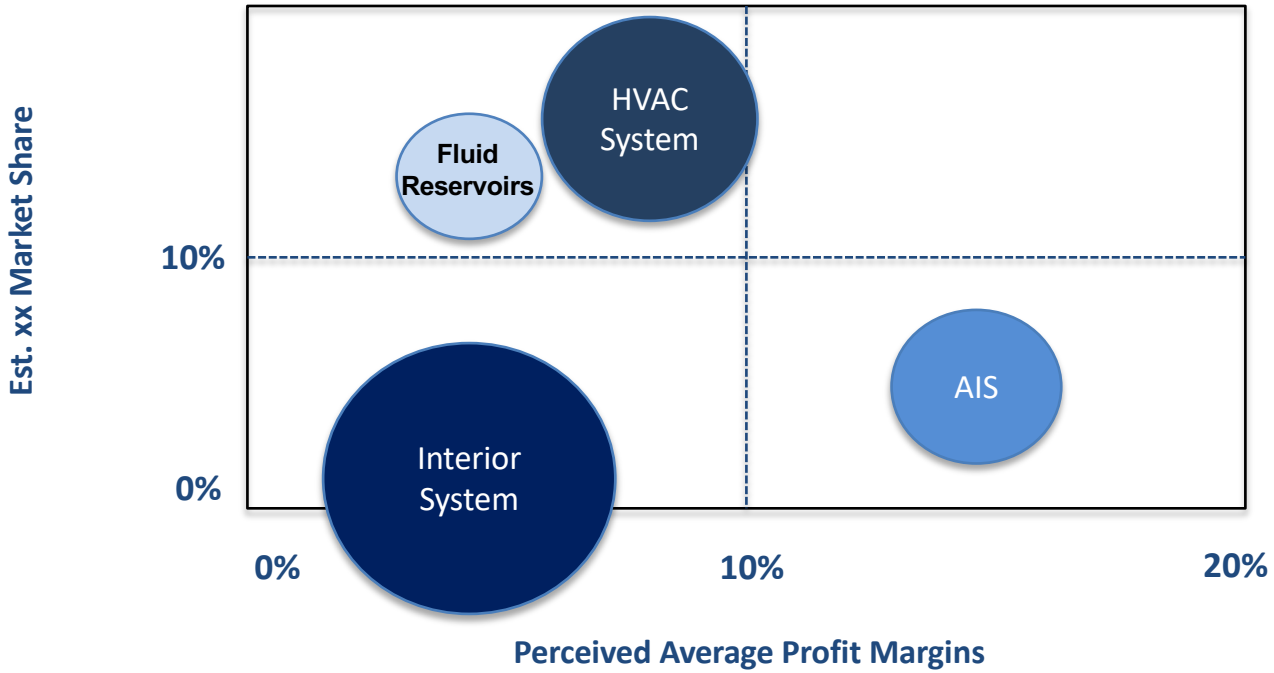
EXAMPLE: KEY TAKE-AWAYS

	Conclusion	Key Findings	Implications/ Key Considerations for Client
1	**X is the global leader for automotive Product A.**	• X is the largest supplier of complete Product A and SS&M and is strong in all 3 regions. • Its 2nd largest competitor, Y, achieved ~$11B in complete Product A sales in 2018, and its Chinese sales are far lower than X's. • X is particularly strong in China, the largest automotive market in the world.	• X is a key established player in the global Product A industry. • X is one of the few players that can support its OEM customers in all regions for complete Product A, but also all the major Product A parts (foam, trim, metals, etc.).

2	**Despite its current issues, X should be able to maintain its leading position.**	• The number of X's new launches will peak in 2019 / early 2020. JIT programs will run for several years. Mechanisms even longer.
		• Therefore X's market share is not likely to crumble over the next 3-4 years, except X gives back business to the OEMs in order to improve its margins.
		• X has decided to be more selective in future with new programs and will focus on sustainable business.
		  • From 2022/23 on, its market share is likely to decrease, but its margins likely to improve significantly.
			• X's size makes it difficult for OEMs to replace it in existing programs.
			• Only a handful of other players like Y, Z, W or V could take-over some of X's business, but they will not do it if it compromises their own margins.
			  • OEMs have very limited true alternatives and are dependent on X to some extent.

EXAMPLE: CONCLUSIONS

System Summary



Comments

- The bubble sizes reflect xx's revenue for the respective systems.
- The perceived average profit margins are based on respondents' feedback. xx seems to achieve far higher margins based on xx's Management presentation.

- The Interior system is xx's largest business. It's also the system where xx has the lowest market share and where profit margins are perceived to be the lowest on average. It is also a highly fragmented market and is relatively commoditized.
- The HVAC system is the second largest market under study and xx is better positioned there. This market uses considerably more blow-molding and has relatively fewer competitors.
- AIS is the third largest market and perceived to offer the highest profit margins of the four systems under study. xx is competitive in this market, but will need to find a global footprint solution in the short-term. It can also invest in 3D blow-molding in order to benefit from the growing CAC duct market.
- The fluid reservoir market is the smallest and also perceived to offer similarly low profit margins like Interiors.

EXAMPLE: CONCLUSIONS

- Of the systems under study, the interior trim market is by far the largest and also the most fragmented.

  – It is a key market for xx, especially due to its size (x-x% of a $3 billion market is considerable revenue) but it's crowded with a large tier one supply-base.
  – Moreover, the OEMs, particularly the Detroit 3, are only expected to move to sourcing more interior trim packages from the tier one suppliers and let them manage the details.
  – This puts xx in a tier two position and limits its direct contact with the OEMs. Although tier twos are typically more profitable than the tier ones, it does change the nature of their relationships with the OEMs.
  – Finally, it is also harder to differentiate in this market. Because most of the parts are injection-molded and most of the suppliers have the same injection molding machines, sourcing typically comes down to price.

- While the HVAC market is not as large as interior trim, it is still considerable in size and represents good opportunities for xx.

  – First, the parts are mostly blow-molded and this is a relative differentiator for xx. Because many companies have either exited blow-molding or refuse to enter the market, it limits the competition.
  – Plus, xx is currently a relevant player in the market and is only expected to remain a key supplier. Therefore, this market should be prioritized for the company.

- AIS is also relevant in market size, but the OEMs do want to source these systems globally, if possible. Therefore, xx will need to find a credible solution moving forward in order to compete with Mann+Hummel and Mahle.

  – Additional growth opportunities exist if xx invests in 3D blow-molding and can benefit from the growth in the CAC duct market.

This concludes our Presentation.
Thank you.

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