

- Systech Evolution & Overview of Key Verticals
- Environment & Market Situation
- Short Term Initiatives & Financials
- Long Term Outlook & Strategy
- One Systech – Key Differentiator
- Mahindra Forgings – Deep Dive
- Aerospace – An Introduction

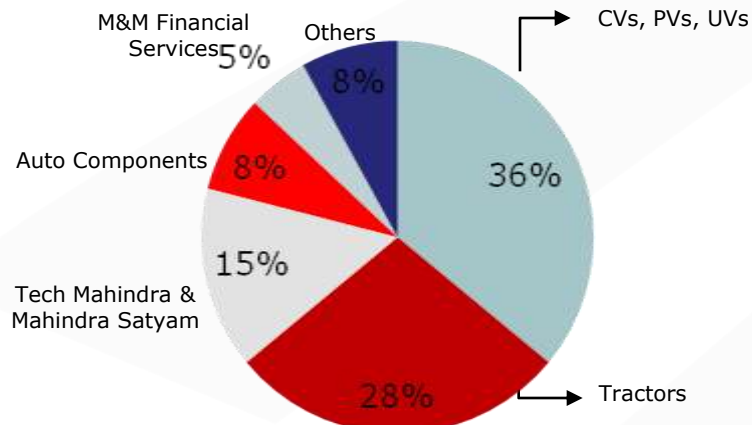
Systemech – A Significant Part of M&M Group

M&M Group Overview

- USD 7.1bn Indian conglomerate
- Among the top tractor manufacturers in the world (by volume) and the market leader in multi utility vehicles in India
- Over 50,000 people & several facilities in India & overseas
- High standards of corporate governance
- Vice-Chairman & Managing Director – Mr. Anand Mahindra

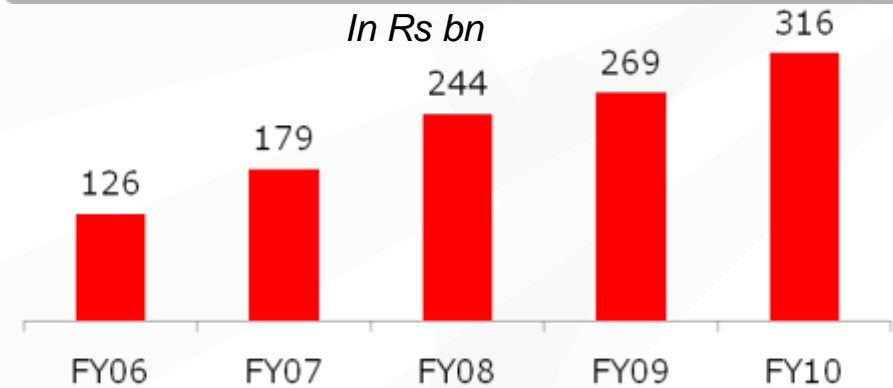
* Source – Bloomberg (as on February 4, 2010),

Revenue Break up by Segments (FY10) *



* Net External Revenue; Others includes Trading, Hospitality, Infrastructure etc
Source – M&M Annual reports, website and Stock Exchange Filing

Strong Historical Growth in Consolidated Revenue



Recent Awards & Recognition

- Forbes' top 200 list of most reputable Global companies, 2009 (among the top 15 Indian companies in that list)
- Recipient of ICSI National Award for Excellence in corporate governance for the year 2008
- Assigned the Governance and Value Creation (GVC) Level - 1 by CRISIL for Governance and Value Creation
- Reputation Institute (US) ranked Mahindra Group among the top 10 Indian companies in its Global 200: The World's Best Corporate Reputations list

System Formed in 2004 with the objective of becoming a Global Auto-Component Player

Background

- Around 2004-2005, European and US auto component manufacturers were going through tough times –
 - 35+ auto part makers filed for bankruptcy protection; S&P downgraded 25 US-based auto component suppliers
- Auto components was increasingly being looked at as a global business out of low-cost countries
 - Rapid increase in exports from India and China with India being recognized for expertise in engine components

M&A to fill in strategic gaps

Key Considerations

- **Technology**
- **Market Access**
- **Quality of Management**
- **Location: Europe**
- **Complementary product portfolio**
- **No auction**
- **Optimal size: 75-100 mn Euros**

Acquisitions

Mahindra Forgings



Casting



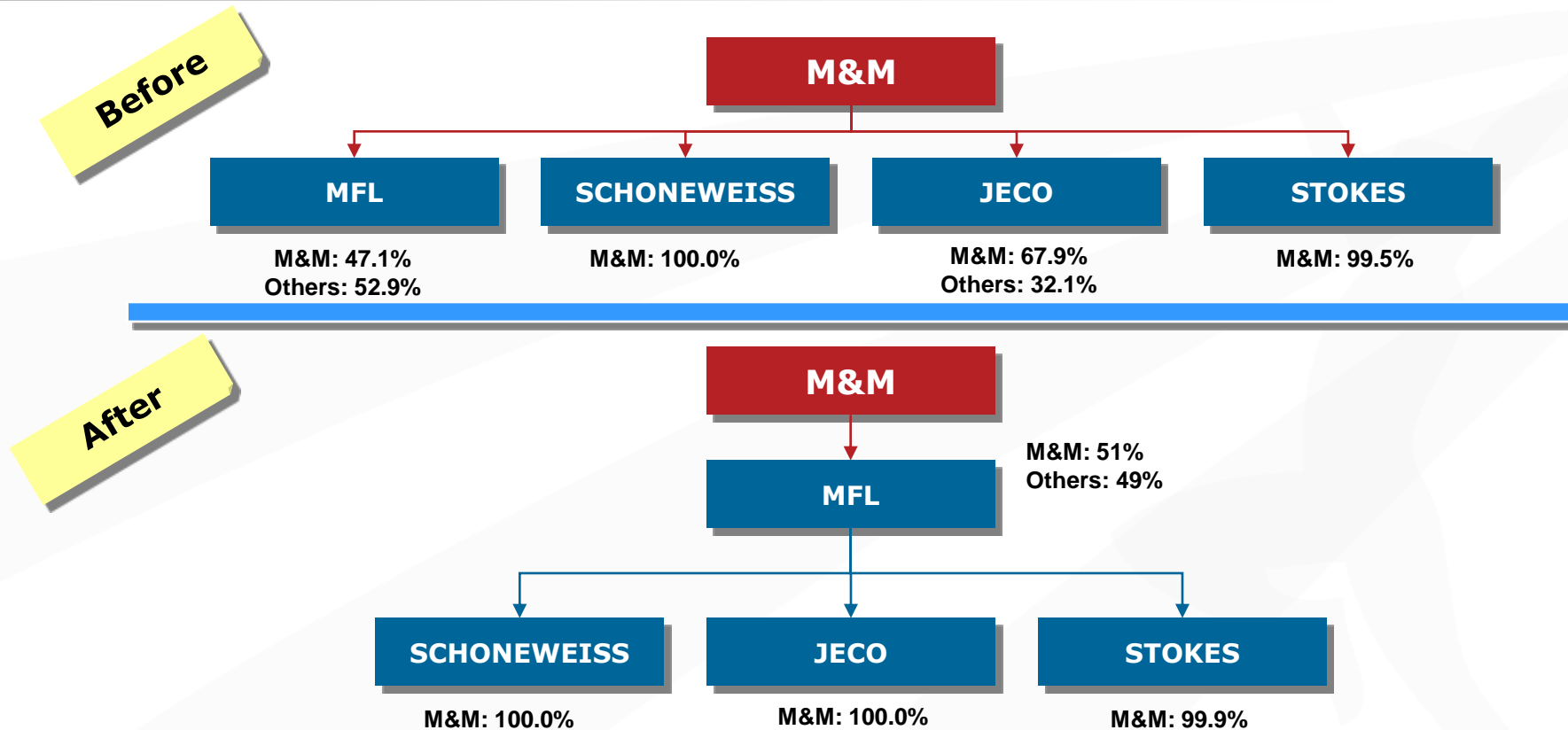
Gears



MES



Holding Structure Created to Enable Global Strategy: MFL case study



Note: Investments in JECO & Schöneweiss are held through investment companies in Mauritius

- Effective April 1, 2007, all units were consolidated under 1 listed umbrella being MFL
 - Focused single entity with aligned objectives to achieve seamless integration

Source – M&M Annual Report (FY07), MFL Annual Report (FY09), www.bseindia.com

Mission Statement – To Become Global “Art to Part” Player

To create India’s most Valuable, Innovative, “Art to Part” auto component entity that partners with its global customers to meet & surpass their business needs



Aspiration – Thinking Big

 **Mahindra Systech**

2010

\$1Bn

\$1Bn



Overview of Key Verticals

Verticals at a Glance



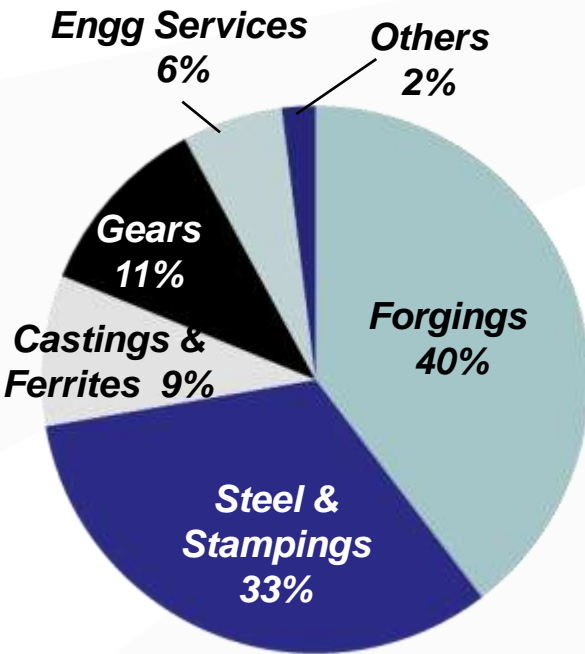
Overview of Key Verticals

Systemch is diversified presence across products, customers & geographies

Products (% of Revenue – FY10)

Key Customers

Plant Locations



100% = \$725 mn

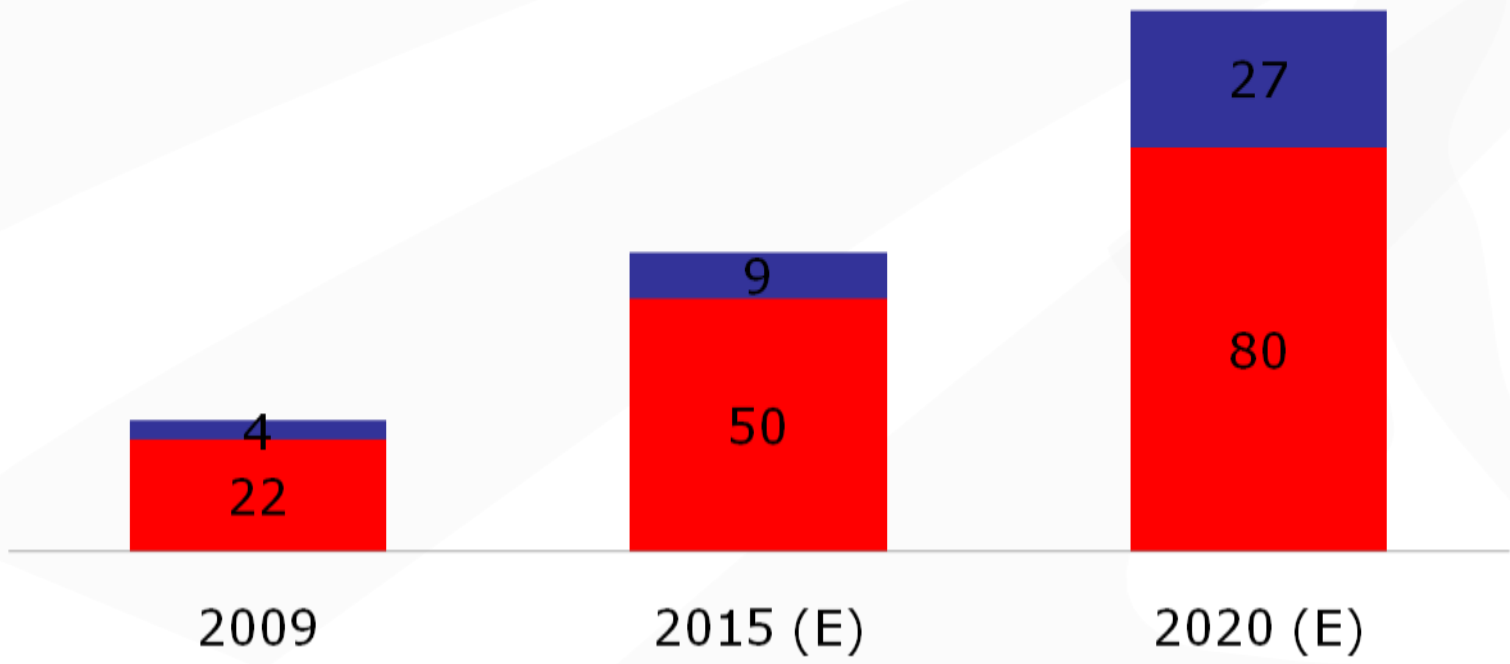


Note: 1. Others include businesses like Mahindra Composites
2. % of revenue calculated without considering intercompany transfer & HQ costs

Indian auto component industry expected to double by 2015

India's Auto Component Potential (US \$ Bn)

■ Domestic Potential ■ Exports Potential

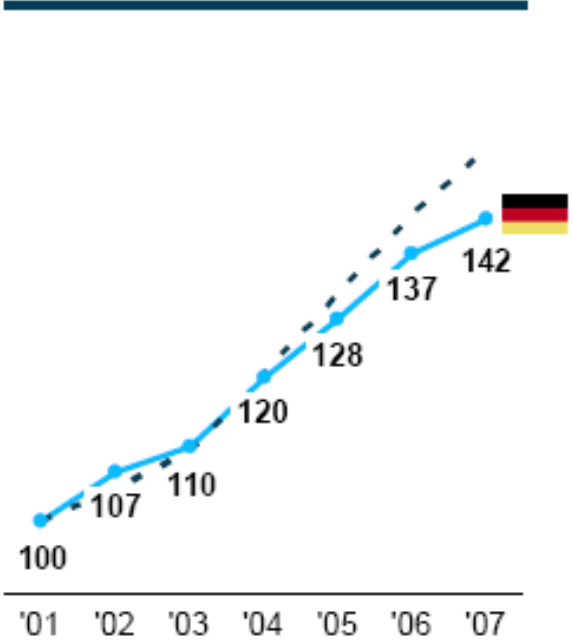


Source: E&Y

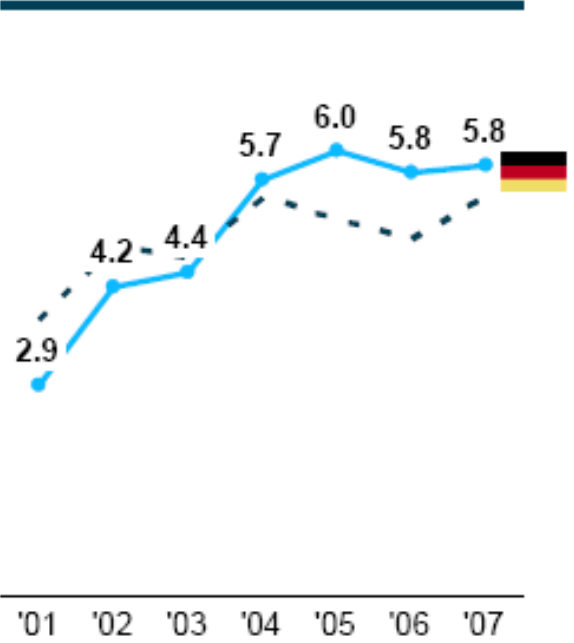
German auto component industry is inherently strong

Key performance indicators 2001-2007 – German suppliers

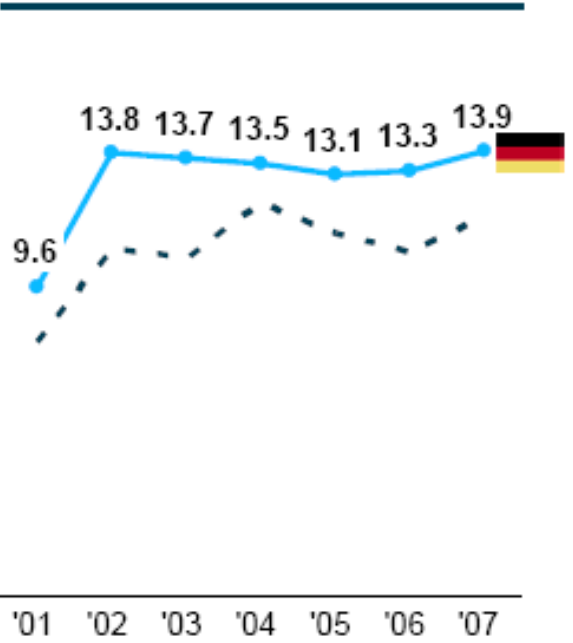
Revenue growth [2001=100]



EBIT margin [%]



ROCE [%]



--- Industry Average — German Suppliers

Basis: Revenue-weighted average of performance-rated suppliers (subset of 21 Germany-based suppliers)

Source: Automotive Supplier Study 2008 by Rothschild & Roland Berger

Globally, Auto and auto component industries are undergoing transformation

OEMs

- Increasingly focused on light weighting and materials
- Increased reliance on electronic technology
- Focus on alternative power trains
- Increasing profitability pressures
 - Global industry EBITDA: 7%, ROCE: 4%

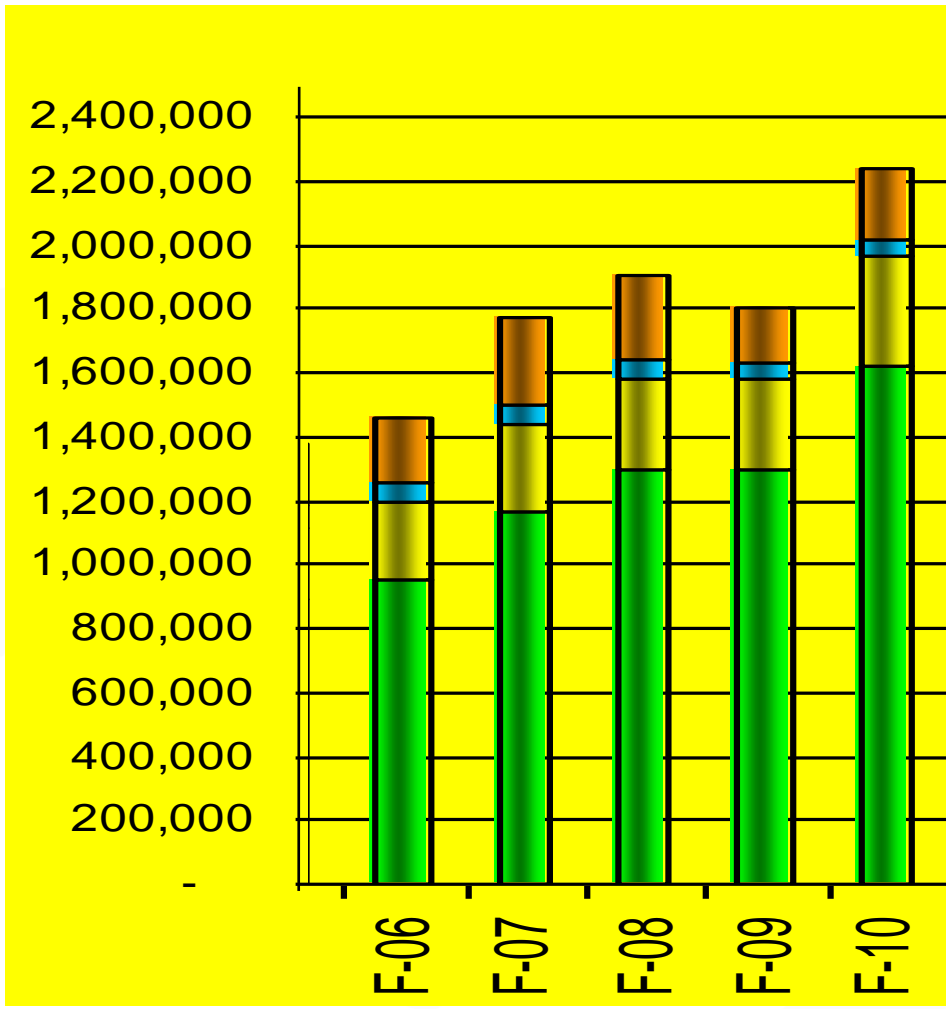
Components Industry

- Companies are diversifying their products
- Moving away from build to print – essentially “art to part”
- Adding original content to program in vehicles
- Increasing emission regulations are driving reduced power trains
- “Greening” of vehicles

With dual shore presence in India & Europe, Systech is well positioned to focus on both technology change and cost optimization required in the future

Source: E&Y

India : Auto sector experiencing double digit growth



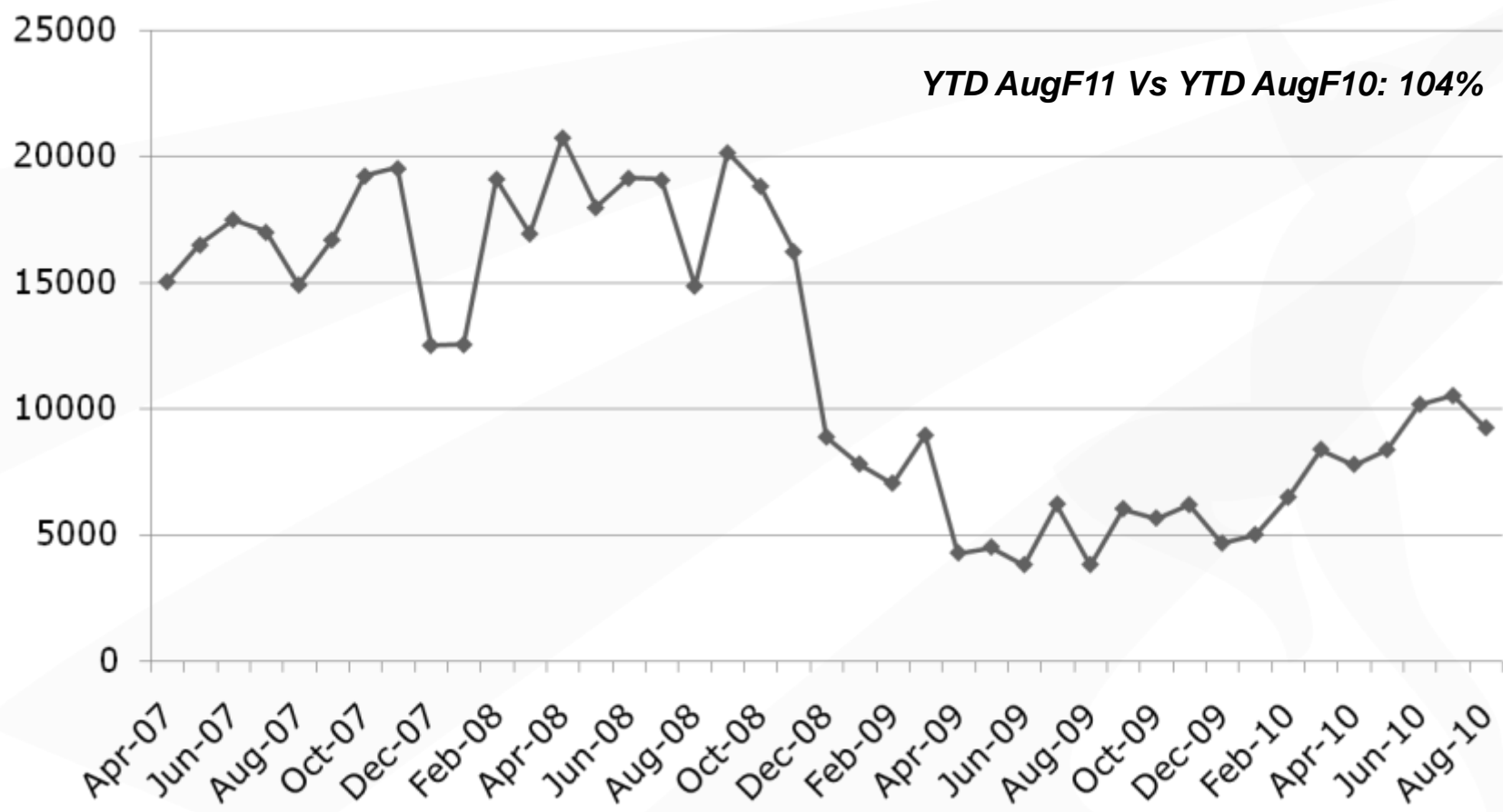
Apr-Aug 2010
All segments experiencing double digit YOY growth

- UVs: 16%
- Cars: ~30%
- LCVs (3.5 to 7.5T): 11%
- M/HCVs: 62%
- Total : 33%

■ Cars ■ UVs ■ LCVs ■ M&HCVs

German Market improving

Production of Heavy Trucks (>6T) in Germany (Month-wise)



Germany experiencing export driven growth but need to watch the sustainability

F10 results lower than F09 because of downturn especially in Europe

All figures in Rs cr.

Business	F10 Actuals		F09 Actuals	
	Revenue	EBITDA	Revenue	EBITDA
Forgings Consolidated*	1330	(6)	2243	127
Steel & Stampings	1086	81	1072	64
Castings & Ferrites	298	28	259	(3)
Gears*	370	29	408	84
Engg Services	191	38	206	36
Total	3173	162	4141	304

** Substantial European presence*

Note: Total calculated after considering other businesses like Composites, intercompany transfers and HQ costs

Systech put a systematic program in place to face the crisis

Mahindra Forgings

- India : Operational improvement
- Europe : Fixed cost reduction and technology innovation

Mahindra Gears

- **Cost Reduction Program:** RM costs, Job work charges and fixed expenses

MUSCO

- **Power Cost Reduction @ Steel**
- Stampings now **the lowest cost** & price in the industry

Mahindra Hinoday

- **P10 Cost Reduction: 10%** ↓
- **Mgmt strength reduced: 25%** ↓
- **Foundry operations:**
 - Rejections from 11-12% to 6%
 - 130 new products developed
- **New Products @ MPD:** Electrode Less lamp

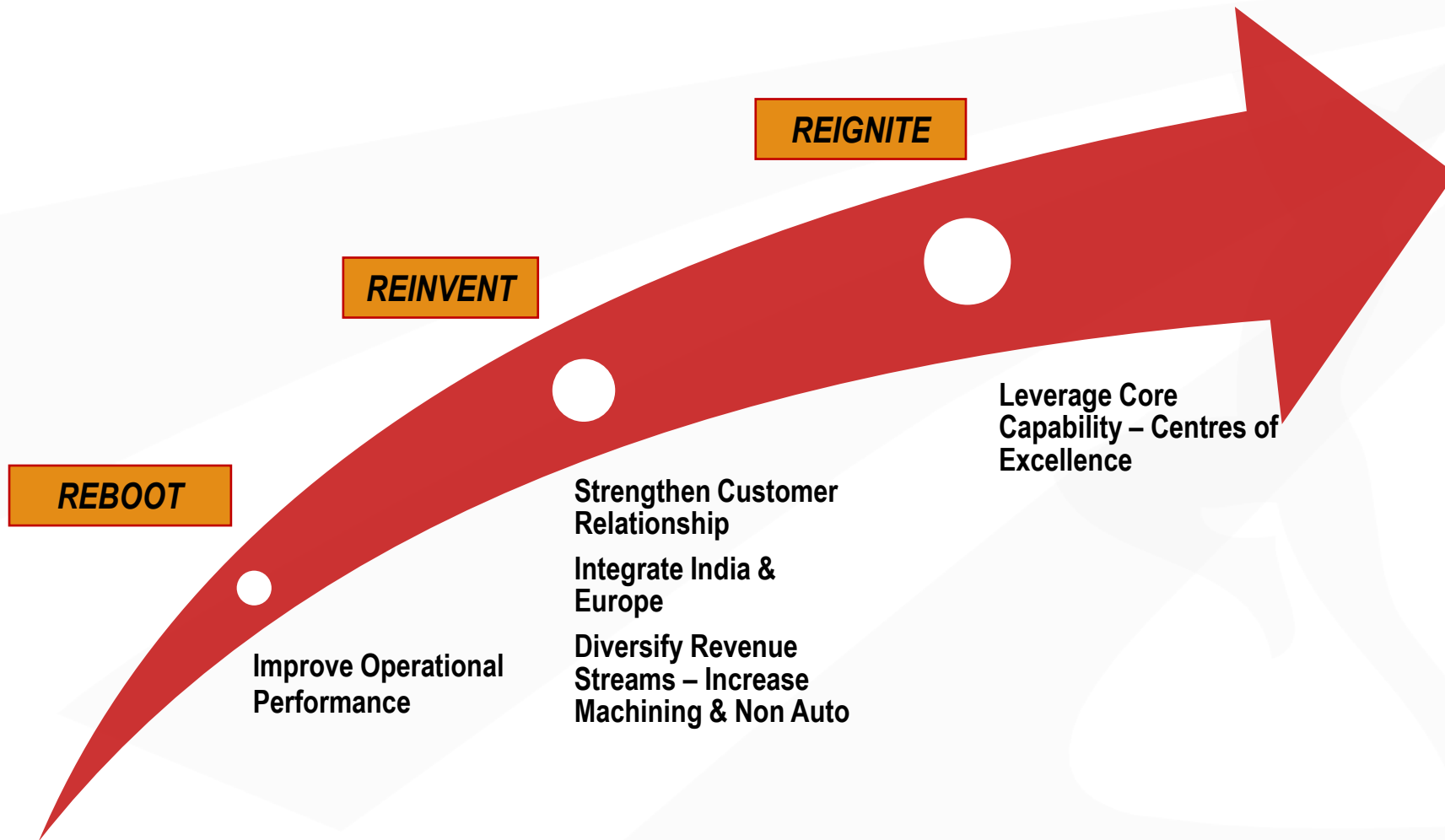
Q1F11 results reflect the results of action taken and market upturn

All figures in Rs cr.

Business	Q1F11 Actuals		Q1F10 Actuals	
	Revenue	EBITDA	Revenue	EBITDA
Forgings Consolidated	405	41	302	(26)
Steel & Stampings	303	24	225	11
Castings & Ferrites	90	7	55	3
Gears	110	9	97	14
Engg Services	42	6	50	12
Total	919	84	703	10

Note: Total calculated after considering other businesses like Composites, intercompany transfers and HQ costs

Systemech Strategy : REBOOT, REINVENT, REIGNITE



Long Term Strategy : Create centres of excellence

Vertical	Centre of Excellence
Forgings - India	Crankshafts
Foundry	Turbocharger housings
Gears	Off Highway gears, Transmission systems
Steel	Micro alloy



We will utilise MES capabilities in this journey

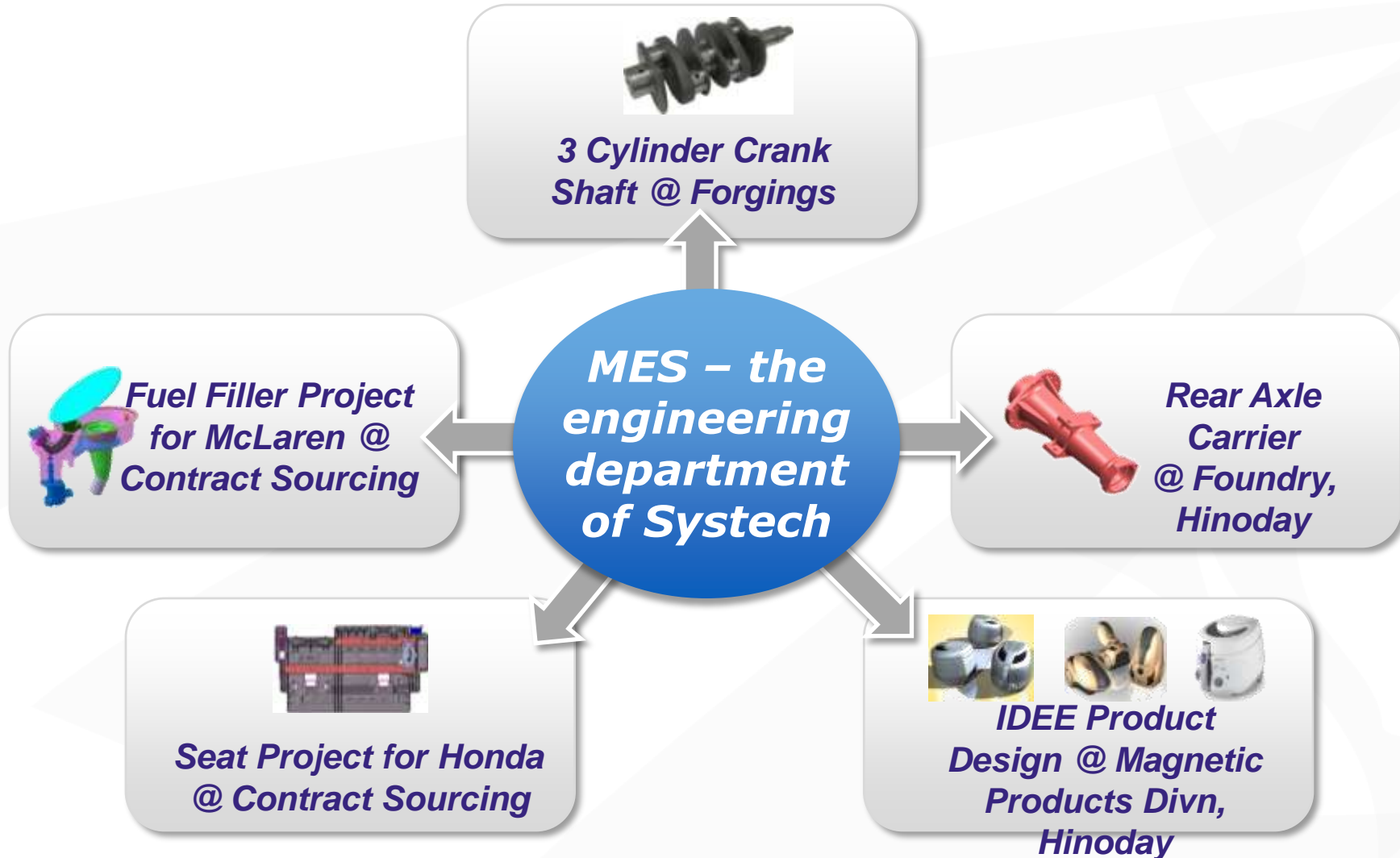
Strategy : Vertical Wise

Vertical	Strategy
Engg Services	<ul style="list-style-type: none"><input type="checkbox"/> Expand auto presence in US, Europe<input type="checkbox"/> Enter emerging markets viz. China, Iran, India<input type="checkbox"/> Enter aerospace & hitech engg services
Forgings	<ul style="list-style-type: none"><input type="checkbox"/> Return Europe to profitability - increase share at OEMS through innovation<input type="checkbox"/> Build a centre of excellence in crankshafts in India – further investments in machining & 12500T press<input type="checkbox"/> Increase exports and non auto presence in India
Foundry	<ul style="list-style-type: none"><input type="checkbox"/> Reach global top 3 in turbine housings<input type="checkbox"/> Retain no 1 in axle parts in the Indian foundry market
Magnetic Products	<ul style="list-style-type: none"><input type="checkbox"/> Retain no 1 position in India<input type="checkbox"/> Move from ferrites to intermediates and branded products

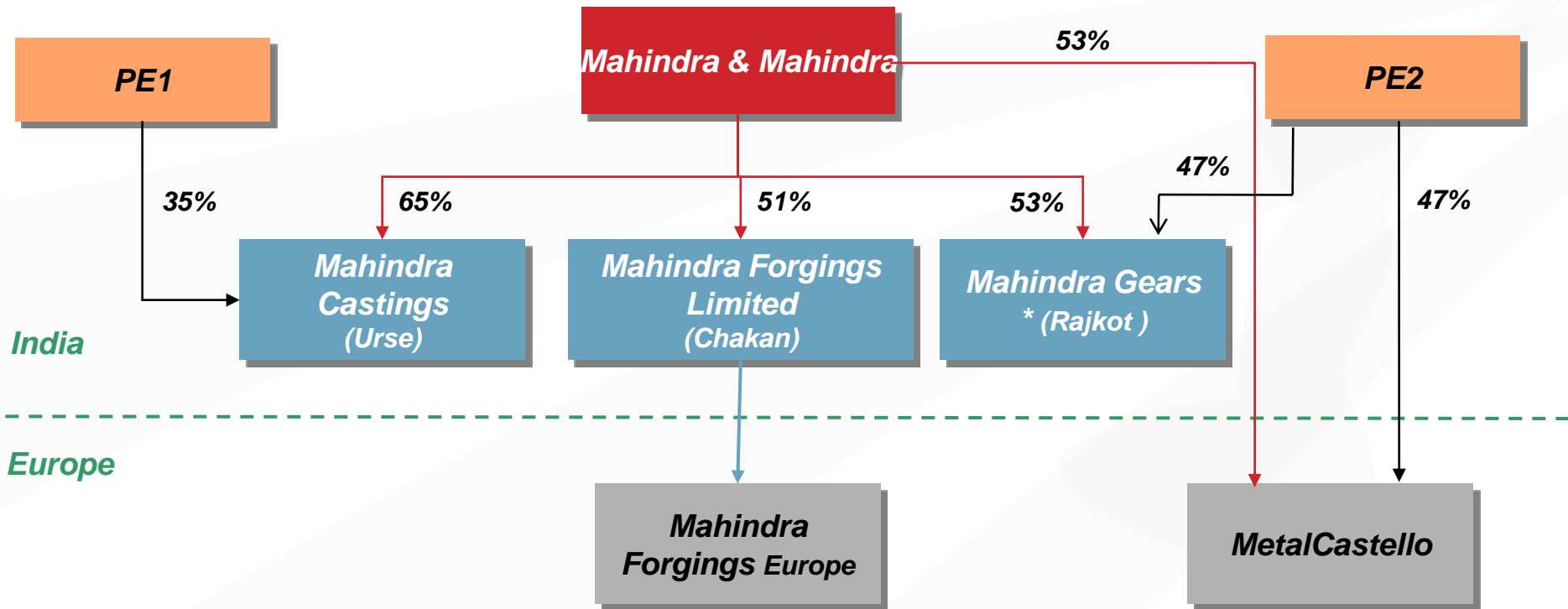
Strategy : Vertical Wise...contd.

Vertical	Strategy
Gears	<ul style="list-style-type: none"><input type="checkbox"/> Consolidate Rajkot & Italian operations<input type="checkbox"/> Create greenfield gears unit to cater to European OEMs<input type="checkbox"/> Explore transmissions
Stampings	<ul style="list-style-type: none"><input type="checkbox"/> Be the lowest cost and price player<input type="checkbox"/> Enter warm stampings and products like tailor welded blanks
Steel	<ul style="list-style-type: none"><input type="checkbox"/> Fully utilise existing capacity<input type="checkbox"/> Enter higher margin segments like oil & gas, defence, engg<input type="checkbox"/> Create micro alloy based product applications for customers<input type="checkbox"/> Fully utilise capacity of rings plant and leverage to sell steel

MES capabilities will help us differentiate ourselves



Systech Today – One Systech being created



We are considering combining all Indian entities under one company –

- All European entities would be subsidiaries of this company*

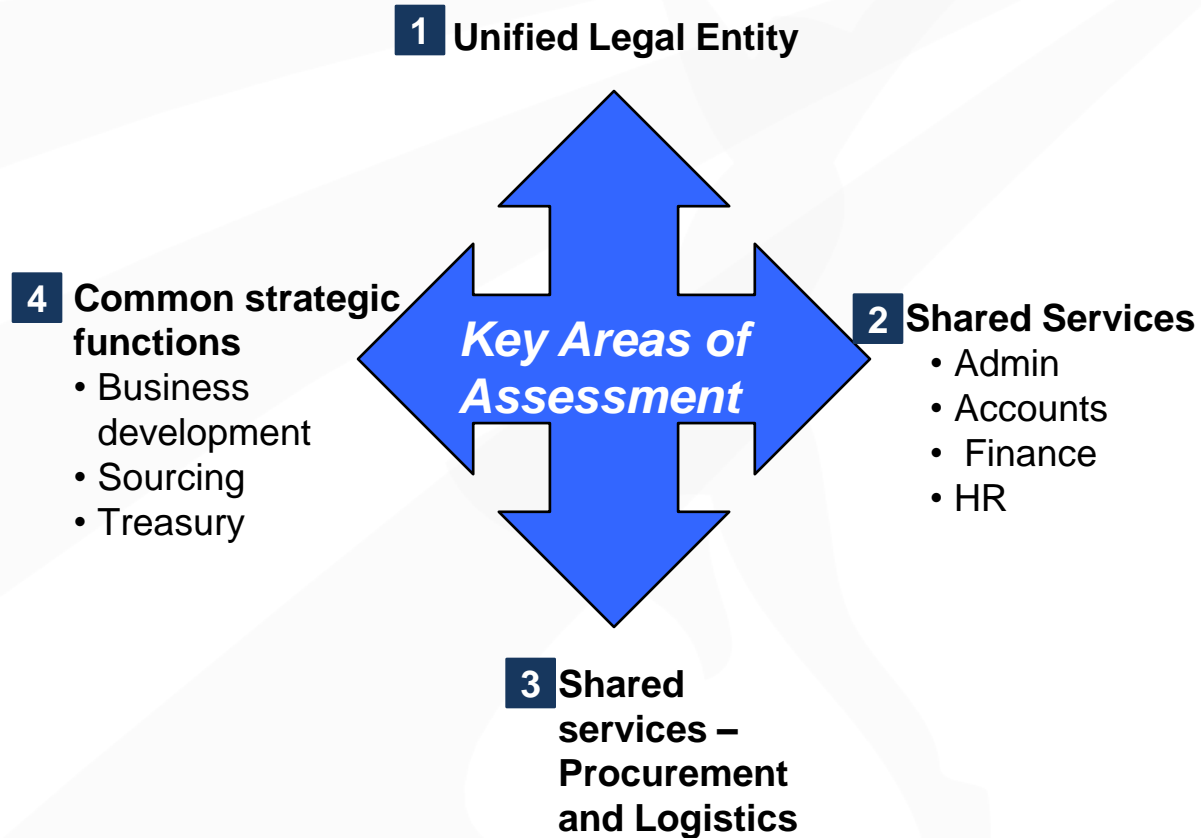
- All investors will be folded into this one entity*

- New partners will also invest in this entity*

Note: Equity holding figures are approximate

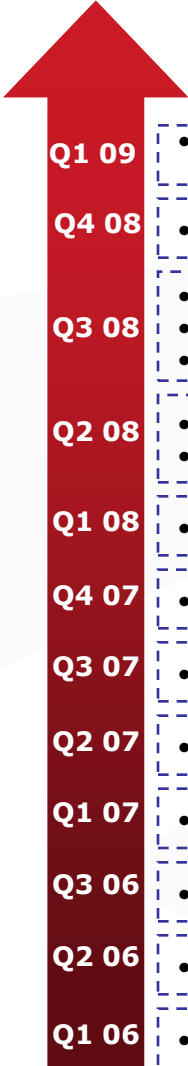
Objectives

- Driving homogeneity of culture
- Presenting single face to market
- Deriving maximum scale benefit
- Maximizing shareholder value

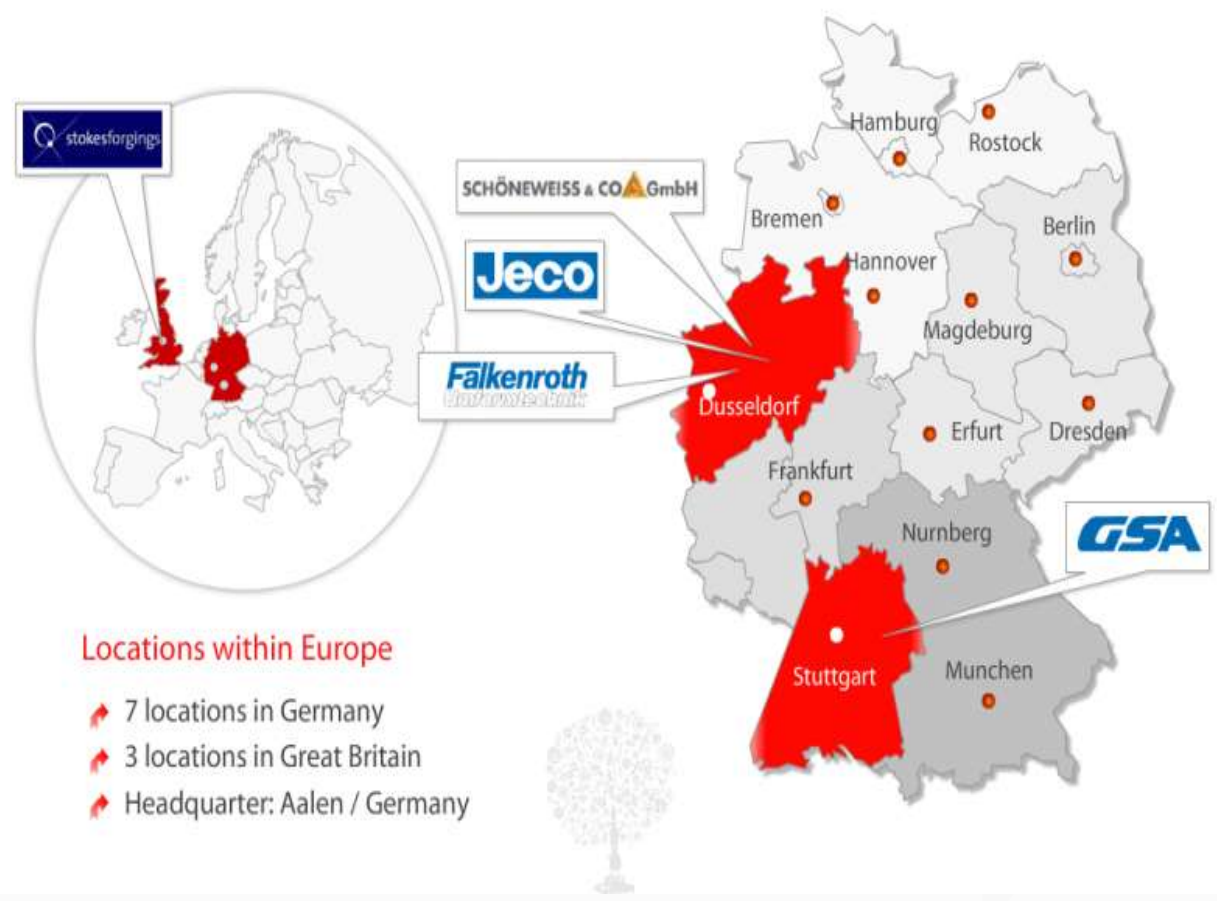


Mahindra Forgings – Deep Dive

Mahindra Forgings: Organic and Inorganic growth to achieve scale, technology and customer reach



- Q1 09**
 - Installation of 12,800 T press in Germany and 6,300 T press in Chakan
- Q4 08**
 - 2nd 4,000T press at Chakan
- Q3 08**
 - 1st 4,000T press at Chakan
 - New m/c shop at Jeco
 - New tool and die shop at Chakan
- Q2 08**
 - Mahindra Forgings Europe formed
 - Machining at Stokes
- Q1 08**
 - 2nd steering knuckle machine line
- Q4 07**
 - Acquired Schoeneweiss
- Q3 07**
 - Acquired Jeco
- Q2 07**
 - 1st steering knuckle machine line
- Q1 07**
 - Crankshaft machining line
- Q3 06**
 - Acquired Stokes
- Q2 06**
 - Acquired Amforge
- Q1 06**
 - Acquired Vauxhall machining lines



Overview of Operations

Europe

- **Main area of operation - CV Forgings**
- **>100 years** of manufacturing history
- **Strong innovation culture** – 3 patents awarded and applied for 11 others
- **Co-development partner** of OEMs
- Wide range of forging capabilities – hammer forging, press forging, hot extrusion, precision forging, friction welding, **12,800T press in Germany**
- Strong tool, die and machining capabilities
- Daimler and MAN are top customers

End-User Segments

- **Commercial Vehicles** segment accounts for **more than half** of the revenue
- **Non-auto segment** also accounts for a significant portion of the revenues. It includes –
 - Marine (stationary engines)
 - Railways
- Passenger Cars
- Tier I Suppliers

India

- **A Leading manufacturer** of crankshaft and stub axles for Indian cars/ MUVs and tractor manufacturers
- **Non-M&M business accounts for >70% of total sales**
- **New Chakan** unveiled after acquisition
 - 4 new presses installed
 - 2 machining lines installed
 - Invested in well equipped die-shop
- Exports to customers like **Renault, Benteler, ZF, VM Motori**

End User Segments

- **Passenger Cars & UVs** constitute >60% of revenues
- **Non-auto segment** also accounts for 20% of the revenues. It includes –
 - Tractors
 - Others incl. railways
- LCVs

Diversified & Complementary Product Portfolio

Passenger Cars

Schoneweiss

- Links/Arms
- Knuckles
- Wheel Carriers
- Spindles
- Shafts

Stokes

- Hubs/Spindles
- Links/Arms
- Shafts/Gears
- Flanges/Yokes
- Levers/Bracket



Jeco

- Links/Arms
- Piston
- Knuckles
- Ball Joints
- Axle Shafts

MFL India

- Crankshafts
- Knuckles
- Con Rods
- Links/Arms

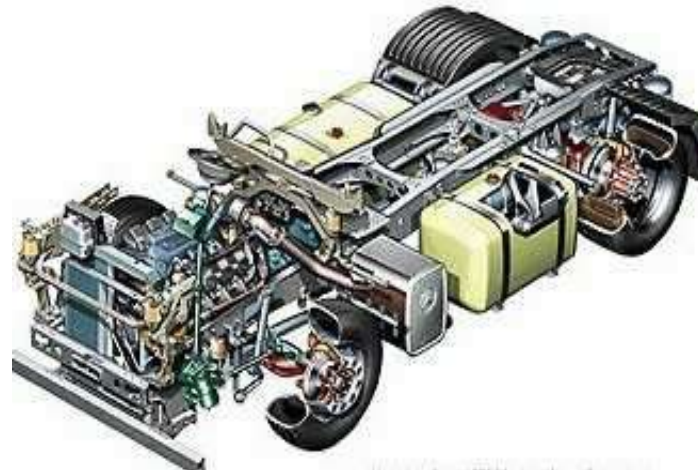
Commercial Vehicles

Schoneweiss

- Front Axle Beams
- Crankshafts
- Camshafts
- Knuckles/Spindles
- Wheel Carriers
- Brackets
- Con Rods

Stokes

- Hubs/Spindles
- Links/Arms
- Shafts/Gears
- Flanges/Yokes
- Levers/Bracket



Jeco

- Front Axle Assly.
- Links/Arms
- Piston
- Knuckles
- Ball Joints
- Axle Shafts

MFL India

- Knuckles
- Con Rods
- Links/Arms
- Shafts
- Stub Axle

Forgings: Marquee Customers

Europe



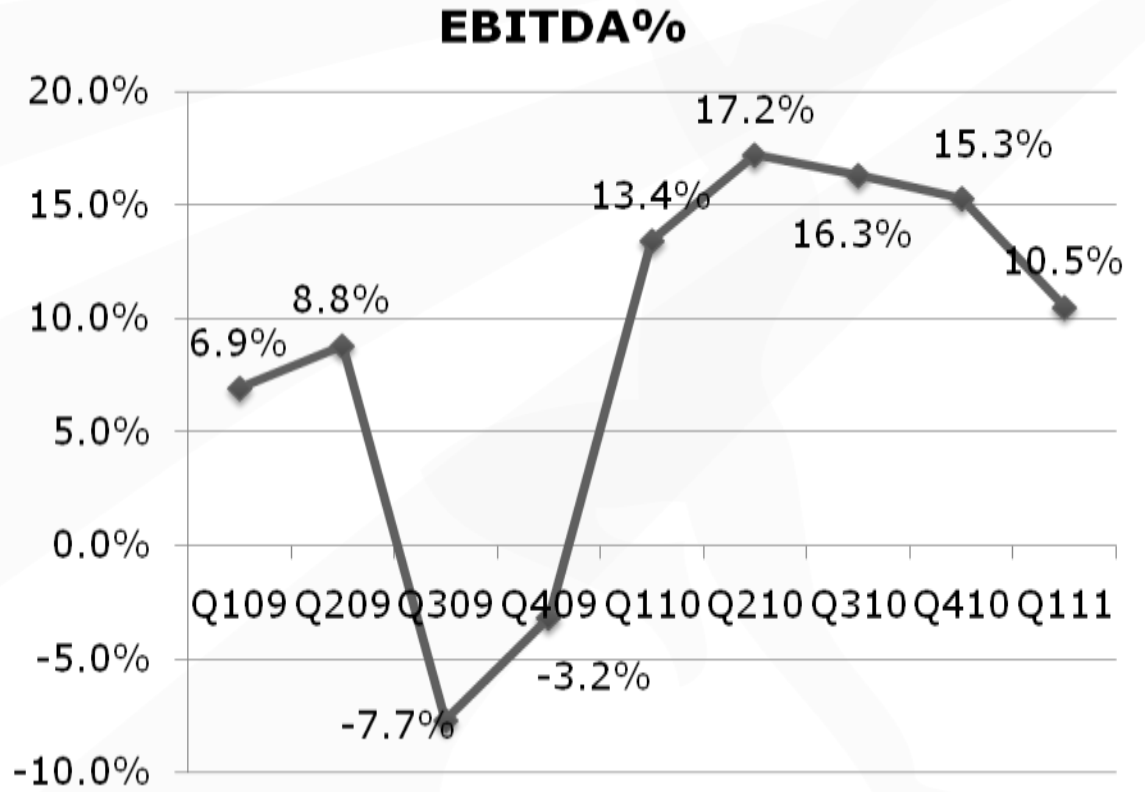
India



MFL, Chakan Performance: Recovery in Place

Actions in FY10

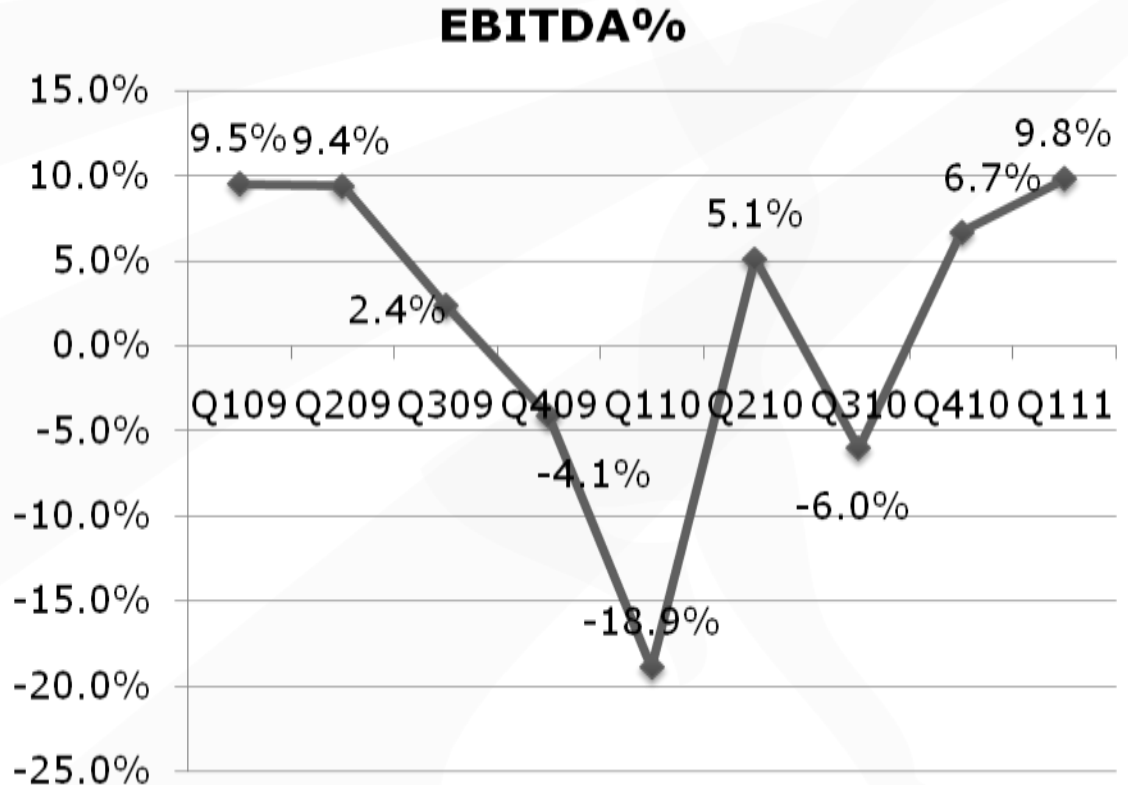
- **Productivity:** up by a quarter ↑
- **Yield:** Savings of Rs 3cr p.a.
- **Rejections:** Halved
- **Improve die life:** by 2 times



MFE Performance : Starting to Recover

Actions in FY10

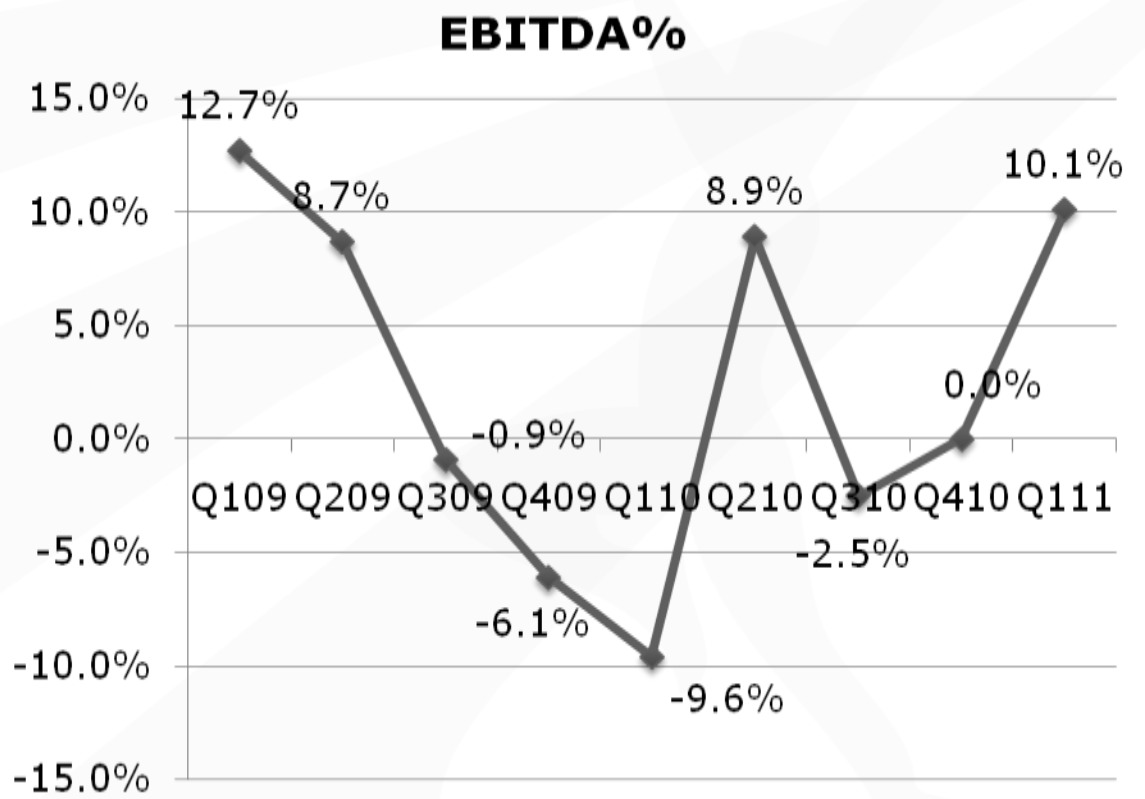
- **Reduction of personnel costs by 45%**
 - reduction of head count by 31 %
 - up to 100 % short time working
- **Reduction of fixed costs by 40 %**
- **Stock reduction by € 20mn**
- **Closure** of Walsall plant, UK
 - Other plants under the scanner
- **Centralization of administration** for northern companies
- **Innovation**: 14 patents applied for



Note: EBITDA% calculated in Euro terms i.e. without currency translation loss

Consolidated Performance

Parameters	FY10	FY09
Revenue (Rs cr)	1,327	2,243
EBIDTA (Rs cr)	(9)	143
EBITDA %	0.0%	6.4%



MFE using innovation to strengthen customer relationships

Example of Innovation

- **Steering knuckle and manufacturing process**
- *DE 202007018728.9*
- working title: pierced steering knuckle



Key insights

- high uncertainty among our customers due to supplier insolvencies
- No customer lost even in downturn
- Extension of portfolio with existing customers since Mahindra is seen as a sound company, e.g. DAF/PACCAR, SAF etc.
- Extension of portfolio with non-automotive customers: Swiss & German Rail
- Expression of interest for new parts (peak revenue in 2014) for ~Euro50mn

MFE transferring knowhow to Chakan to improve operations

Example of Cross Pollination

MFE transferring knowhow to Chakan : Key Areas

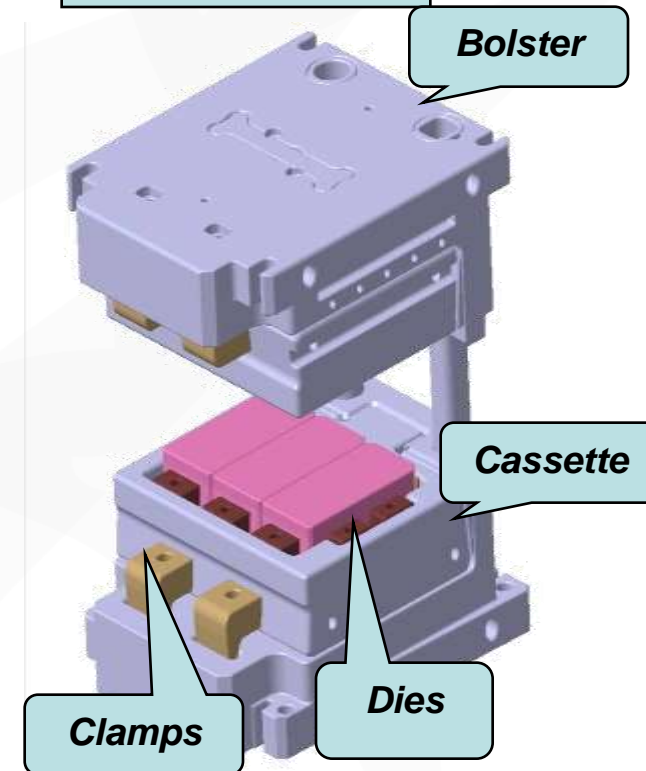
1. Engineering & Design
2. Tool Shop
3. Forge Shop
4. Maintenance
5. Quality Management

Old method



Only the single elements were seen/ addressed locally.

New method



Complete System - Bed, Bolster, Cassette, Dies & Clamps

Mahindra Forgings Growth Strategy

Reboot

Europe

- **Fundamentally restructure costs**
- **No further investments** required Europe to sustain future growth

India

- Higher capacity utilization
- **Improvement in yields** leading to saving in raw material consumption
- Improvement in **rejection ratios**
- Improvement in die life through **new die-welding technology**

Re-invent

Europe

- Focus on process innovation to differentiate
 - **Co-development approach** with key OEMs
 - Association with key **engineering institutes** like Fraunhofer Institute, Germany

India

- **Increase customer base** through exports
 - Leverage European customer access
- Deeper relationships with new **OEMs entering India**
- Moving up the value chain
 - Investments into new **machining lines** completed
- Diversifying into non-auto business (railways and marine)

Re-ignite

- Focused **centres of excellence**
 - Crankshafts and stub-axles in India
 - CV forgings in Europe
- Increase production capabilities in India by investing in higher tonnage presses and additional machine lines
- **Maintain Technology leadership in CV forgings** in Europe
- Maintain market share in Europe and grow in India

Setting up Mahindra Aerospace: Grabbing opportunities as they came



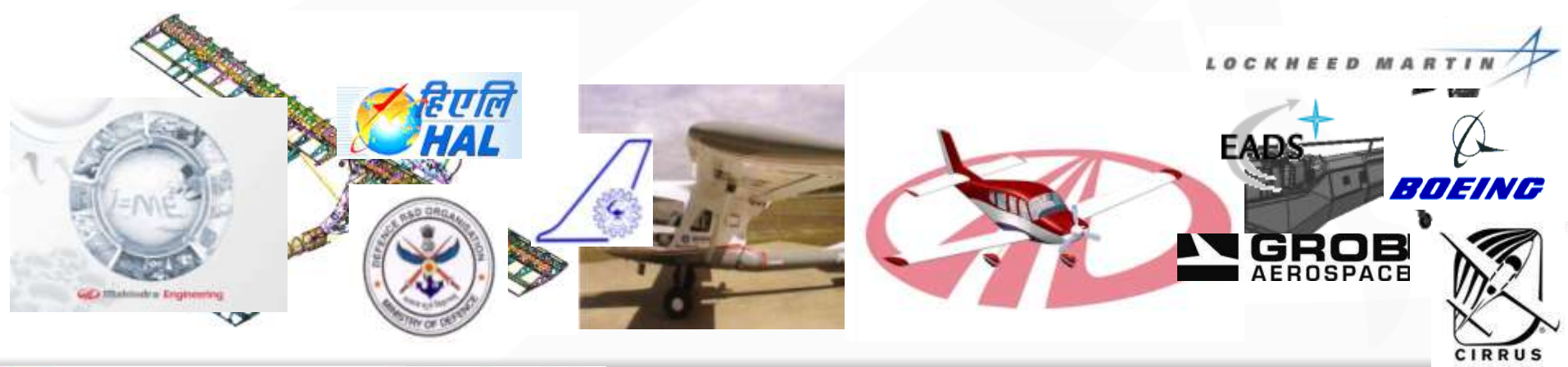
- **Then:** Rs10 cr, 100% M&M
- **Now:** Rs 200 cr, 20% M&M

- Excellent aerospace talent pool
- 5 acres of industrial land
- Strong domestic network

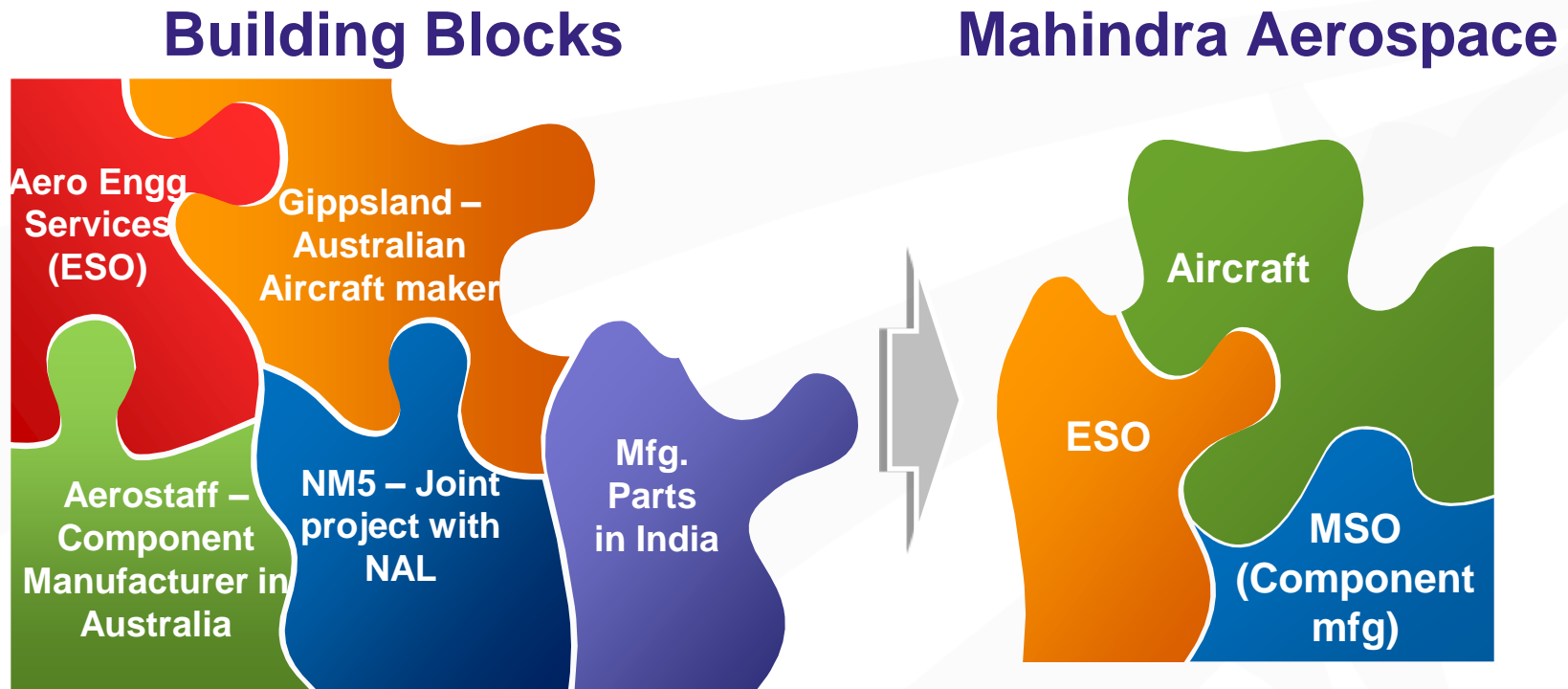
- Manufacture of Seabird Seeker
- Design of combat helicopter
- NAL approaches us for 5 seater project, Saras

- Approval of Rs 30 cr to co-develop NM5 with NAL
- Internal call: go upto “type certification”

- Offset policy opportunities
- Overtures from global aero OEMs
- Light aircraft opportunities



Mahindra Aerospace: Building Blocks



- Consolidate the acquired operations
- Reorganize under ONE management umbrella
- Design – prototype – produce – market
- aircraft parts, assemblies & small utility aircraft

Aero Components: Dual Shoring between India & Australia

... and in time, major assemblies

... sub-assemblies...







*Small parts:
simple & complex...*



**Increasing
complexity
handled with
time**

Aircrafts: Focus on general aviation (<20 seater)

Mahindra Aerospace Aircraft Portfolio

	GA200	NM5	GA8NA	GA8TC	GA10	GA18
						
Seats	2	5	8	8	10	18
Fuel	Aviation Gasoline				Aviation Turbine Fuel	
Segment	Agricultural operations	Air taxi / Charter / Freight / Tourism / Corporate travel / Patrol / Survey / Reconnaissance / Specialty ops				
Status	50 aircraft in service globally	To fly 2011	~140 aircraft in service globally	Recently launched- already in service in Europe and Australia	To fly 2011	To fly 2011

THANK YOU