Alstom Capital Markets Day
Paris - France
June 24 2019
This presentation contains forward-looking statements which are based on current plans and forecasts of Alstom’s management. Such forward-looking statements are by their nature subject to a number of important risk and uncertainty factors (such as those described in the documents filed by Alstom with the French AMF) that could cause actual results to differ from the plans, objectives and expectations expressed in such forward-looking statements.

These such forward-looking statements speak only as of the date on which they are made, and Alstom undertakes no obligation to update or revise any of them, whether as a result of new information, future events or otherwise.
AGENDA

9:30-10:00 am
- Welcome Coffee

10:00-12:15 pm
- Alstom today, market perspectives, Strategy overview
  Henri Poupard-Lafarge – Chairman & CEO
- Finance
  Laurent Martinez – CFO
- Efficiency
  Thierry Best – Operations SVP
- India
  Ling Fang – APAC SVP

12:15-12:45 pm
- Questions & answers

12:45-2:00 pm
- Lunch break

2:00-3:30 pm
- Signalling
  Jean François Beaudoin – Digital Mobility SVP
- Services
  Bernd Burgstahler – Services VP
- Innovation
  Marc Granger – CSO

3:30-4:00 pm
- Questions & answers

4:00-4:15 pm
- Closing remarks
  Henri Poupard-Lafarge – Chairman & CEO
Today’s speakers

Henri Poupard-Lafarge
Chairman & Chief Executive Office

Laurent Martinez
Chief Financial Officer

Thierry Best
Operations Senior Vice President

Ling Fang
Asia Pacific Senior Vice President

Jean François Beaudoin
Digital Mobility Senior Vice President

Bernd Burgstahler
Services Vice President

Marc Granger
Chief Strategy Officer
Alstom today, Market perspectives, Strategy overview
Henri POUPART-LAFARGE – Chairman & CEO
2019 Capital Markets Day
Alstom today
2016 – 2019: establishing a successful rail pure player

Alstom 2020 Strategy

- CUSTOMER-FOCUSED ORGANISATION
- COMPLETE RANGE OF SOLUTIONS
- VALUE CREATION THROUGH INNOVATION
- OPERATIONAL & ENVIRONMENTAL EXCELLENCE
- DIVERSE AND ENTREPRENEURIAL PEOPLE
The most global player, a leader in all geographies, result of outstanding growth

**Alstom within the top 3 market share in every region**

<table>
<thead>
<tr>
<th>Region</th>
<th>2018/19 Sales (€ Bn)</th>
<th>CAGR (%)</th>
<th>Market Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>6.9</td>
<td>5.5%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>7.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>7.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle-East</td>
<td>8.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Growth outperforming the market**

Alstom sales, by region, in € Bn

- **Americas**: 6.9 € Bn (CAGR 5.5%, Market Share 2.3%)
- **Asia Pacific**: 7.3 € Bn
- **Europe**: 7.3 € Bn
- **Middle-East**: 8.1 € Bn

1. Based on last 3 years orders vs accessible market; 2 Americas excluding freight market; 3 Russia not included as market handled directly by TMH; 4 CAGR between 2015/17 and 2018/20; 5 15/16 and 16/17 numbers are per IAS 11; 6 Restated for IFRS 9 & 15.

- Sources: Alstom; UNIFE Market Study 2018
A unique multiregional footprint key to the group’s commercial success and competitiveness

- **Europe**: 21,400
- **Americas**: 5,200
- **Asia Pacific**: 5,200
- **Middle East Africa**: 4,500

36,300 people in over 60 countries

- **New regional hubs**
  - USA
  - Brazil
  - South Africa
  - India
  - Bangalore
  - Katowice

- **Customer Intimacy**
- **Localisation demand**
- **Best shoring**
- **Competitive offering and talent reservoir**
- **Global M&A and partnerships**
- **Access to market**
- **Project execution**
A diverse and innovative portfolio of solutions

**ROLLING STOCK**
- High Speed & Very High Speed
- Suburban & regional trains
- Metros
- Tramways
- Locomotives
- Electrical bus

**SYSTEMS**
- Infrastructure
- Integrated solutions

**SERVICES**
- Maintenance
- Modernisation
- Parts & Repairs
- Support services

**SIGNALLING**
- Mainline networks
- Urban networks
- Network and passenger monitoring and surveillance systems

**New platforms and breakthrough innovations in all product lines**

**ROLLING STOCK**
- Tramway
  - Citadis XOs Alu
- Regional
  - Coradia Stream
- Regional
  - Coradia iLint
- E-Bus
  - Aptis
- High-speed
  - Avelia Liberty – Amtrak & TGV
- Locomotive
  - Prima H3
- Systems
  - Montreal (REM)
- Infrastructure
  - SRS
- Services
  - Health Hub

**Split of Alstom FY2018/19 Sales**
- ROLLING STOCK: €3.4Bn (43%)
- SYSTEMS: €1.8Bn (22%)
- SIGNALLING: €1.3Bn (16%)
- SERVICES: €1.6Bn (19%)

**R&D investments**
- 4-5% sales
- 2015/16 – 2018/19

* FY2015/16 and FY2016/17 restated for IFRS 15
Strong project execution and ability to improve operational profitability

Operational excellence

- On time delivery: +15% from 2015/16 to 2018/19
- Decreased cost of non quality in percentage points: -0.34pp from 2015/16 to 2018/19

Margin evolution

Gross Margin on Order Intake, in %

<table>
<thead>
<tr>
<th>Year</th>
<th>2015/16</th>
<th>2016/17</th>
<th>2017/18</th>
<th>2018/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin</td>
<td>7.8%</td>
<td>7.4%</td>
<td>7.8%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

Structural cost control

SG&A evolution contained despite fast growing sales (in €m)

<table>
<thead>
<tr>
<th>Year</th>
<th>As of % sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015/16</td>
<td>(536)</td>
</tr>
<tr>
<td>2016/17</td>
<td>(539)</td>
</tr>
<tr>
<td>2017/18</td>
<td>(570)</td>
</tr>
<tr>
<td>2018/19</td>
<td>(571)</td>
</tr>
</tbody>
</table>

Margin at completion increase on projects portfolio

<table>
<thead>
<tr>
<th>Year</th>
<th>FY 2015/16</th>
<th>FY 2016/17</th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin</td>
<td>(536)</td>
<td>(539)</td>
<td>(570)</td>
<td>(571)</td>
</tr>
</tbody>
</table>
Strategy 2020 largely a success, ready for the next step

Record backlog in the industry, geared for sustainable growth

Backlog in 2018/19

- Alstom: €40.5Bn
- Global competitor 1: €33Bn
- Global competitor 2: €30Bn

Global competitor 1

Global competitor 2

Outperformed market and main competition’s growth

Sales 2015/16¹ – 2018/19

- Alstom: 5.5%
- Global competitor 1: 5.3%
- Global competitor 2: 2.5%
- Market: 2.3%

Global competitor 1

Global competitor 2

Market

Strong increase in profitability

aEBIT (in €m)

- FY 2018/19: 7.1% (570 +1.8pt)
- FY 2015/16: 5.3% (366)

Significant recovery in free cash flow

FCF (in €m)

- FY 2018/19: -326
- FY 2015/16: FCF +479m

Strategy 2020 objectives: 5% sales organic growth per year, around 7% Adjusted EBIT margin, c. 100% conversion from net income to free cash flow

¹ Based on published data on local currency
² Under IAS11 standards, not restated for IFRS 9 & 15 and based on published data on local currency
Market perspectives
Robust macro-economic drivers supporting the steady growth of rail traffic

Note: Urban traffic figures are for Top 30 cities worldwide; Mainline & Freight traffic figures are for all major national operators worldwide

Urbanisation
-60% of urban population projected by 2050

Sustainable development
-60% CO₂ emissions expected in transport by 2050 (vs.1990)

Economic growth
+3.8% p.a.

Governmental funding
Improvement of OECD average budget deficit: -0.15% in 2017 vs. -4.8% 2013

WW GDP growth projected between 2017 and 2022
+60% CO₂ emissions expected in transport by 2050 (vs.1990)

Passenger traffic per market segment
In basis 100

Average growth (2015 – 2025)

Urban
+5.2%

Mainline
+3.2%

Freight
+1.4%

A positive rail manufacturing market outlook

Global rail OEM market, in € Bn

LATAM
Uncertain momentum

MEA
Economic slowdown may hamper scheduled growth

APAC
Urbanisation driven growth

EUROPE
Strong green & brownfield pipeline

NORTH AMERICA
Mainline and freight locos dynamism

Global rail OEM market, in € Bn

<table>
<thead>
<tr>
<th>Category</th>
<th>2018-2020</th>
<th>2021-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATAM</td>
<td>114</td>
<td>125</td>
</tr>
<tr>
<td>MEA</td>
<td>53.8</td>
<td>57.4</td>
</tr>
<tr>
<td>APAC</td>
<td>28.2</td>
<td>32.3</td>
</tr>
<tr>
<td>EUROPE</td>
<td>20.4</td>
<td>20.1</td>
</tr>
<tr>
<td>NORTH AMERICA</td>
<td>7.6</td>
<td>4.9</td>
</tr>
</tbody>
</table>

CAGR +3.0%

TURNKEY
Strong potential constrained by uncertain momentum in MEA

INFRA
Standardisation and digitalisation trend

SIGNALLING
Robust growth supported by liberalisation

SERVICES
Urban and regional

ROLLING STOCK

Source: UNIFE Market Study 2018

1 Including France and including CIS
A more diverse set of clients

Longstanding clients
National operators on traditional markets

New clients
Internationalised Operators
Private operators
Transport Authorities
Infrastructure funds

Clients becoming more and more partners

Demand shift towards:
- Lower Total Cost of Ownership is becoming the rule
- Higher demand for services contracts
- Flexible Rolling Stock

New business models emerging (e.g. leasing, pay-per-use)

Level of tender specification highly dependent on type of clients
Growing environmental concerns while rapid advancement of green technologies

**Multiplication of "diesel ban"**

- Copenhagen
- Paris
- Norway
- Netherlands
- Munich
- Stuttgart
- Dusseldorf
- Hamburg
- California
- Finland
- Brazil

**Continued investment in hydrogen**

Hydrogen Council: ~$10bn investment (2017)

**Increased availability of green technologies**

Li-ion battery cell cost development, USD/kWh; 2016 - 2030

**H2 mobility Germany:**

~€350m investment (2015)

Build up to 400 hydrogen refuelling stations by 2023

XX Ban of diesel cars
XX Ban of all internal-combustion cars
XX Ban of sales of new ICE cars, use of existing cars allowed
XX Objective to run on 100% renewable energy

Source: Corporate websites, Roland Berger
Digital revolution carrying changes in our industry

Rapid progress in digital technologies...

- Big data
- Advanced analytics
- Cloud
- Sensors
- IoT
- Very high speed
- Network
- Artificial intelligence

...Enabling new mobility solutions...

- Connected
- Autonomous
- Shared mobility
- Multimodal flow

...And impacting the rail value chain

- **Data**: new gold for all players
- **Value in complex algorithms** for maintenance, operations or customer facing services
- **Cybersecurity** as a key concern
- **Multimodality, mobility as a service and sharing economy** blurring the frontier between different ground transportation modes
Looking further afield: convergence of rail-guided mobility and the world of private individual vehicles

ALSTOM GEARED FOR THE FUTURE MOBILITY LANDSCAPE

With new mobility requirements approaching rail requirements while rail is resilient and will remain the backbone of mass transit
Strategy overview
Our mid-term ambition

Be the leading global innovative player for a **sustainable** and **smart mobility**
AiM – Alstom in Motion: our strategic plan for 2019 - 2023

GROWTH
by offering greater value to our customers

INNOVATION
in smarter and greener mobility solutions

EFFICIENCY,
powered by digital

Driven by One Alstom team, Agile, Inclusive and Responsible
Leverage our recognised expertise and our customer intimacy worldwide

SERVICES
Become the undisputed leader

SIGNALLING
Gain product and market leadership

ROLLING STOCK & SYSTEMS
Grow profitably leveraging our new platforms

#1 OR #2 IN OUR MARKETS – GEOGRAPHIES AND LINES OF BUSINESSES
Outstanding market potential

Accessible market by 2023: ~€42bn\(^1\), largely untapped

Strong growth drivers: liberalisation, efficiency concerns of operators, growing and ageing installed base

Sound strategic and financial rationale:
20 years+ term contracts, high margins, customer intimacy, low capex

Alstom best positioned with unique assets and excellent track-record

- Installed base + 50,000 vehicles, only 1/5 clients have service contracts today
- Numerous success stories of subcontracting to traditional operators
- Digital-driven maintenance, green retractioning, proven ability to maintain non Alstom fleet

Next Priorities:

1. New revenue streams in parts
2. Expand our leadership in maintenance
3. Green modernisation

\(^1\) Including signalling services
Source: UNIFE Market Study 2018
Signalling: gain product and market leadership

**Accessibe Market Segment Breakdown**

- **Mainline**: driven by Europe and ETCS upswing
  - ~€12Bn
  - Over past years
  - 46%
- **URBAN**: large roll-outs planned
  - 34%
- **F&M**: steered by NAM, continued strong financial and strategic rationale
  - 6%
  - 8%
  - 6%
- **Mainline Wayside**
- **Mainline Onboard**
- **Mainline Others**

**NEXT PRIORITIES:**

- **Leverage our assets to capture growth:**
  - ✓ ETCS expertise
  - ✓ Complex project know-how
  - ✓ #1 in China and India for Urban
  - ✓ Leader in NAM Freight and mining
  - ✓ Global footprint

- **Standardise our platforms to gain in agility and competitiveness**

- **Deepen technological leadership**

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1 Excluding Services
Source: UNIFE study 2018 & Company data

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Rolling stock & Systems: leverage our new platforms to further expand

Already a leading position in our markets
Market shares 3Y Orders – March 19, in %

- High technology products
- Competitive on price (Total Cost of Ownership) quality and time
- Ability to customise and respond to clients’ demands

New platforms already well commercialised
Orders FY 2016/17-2018/19

- Higher penetration in established markets and extension to new geographies – with same products or products with limited adaptation
- Increased competitiveness through standardisation

50% of orders from new platforms

Latest developments:
- Maintenance consideration fully embedded in design and manufacturing
- From energy usage reduction to limiting the impact on the infrastructure
- Integration of digital solutions

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1 The addressable rolling stock excludes D-Loco, Wagons, Coaches and APM. Coradia Stream – Netherlands and Italy projects

Source: Alstom competitor orders database
Already recognised breakthrough innovations in green and smart mobility

- Unique electric bus
  Built from base zero
  Won one of the largest European tenders

- First Hydrogen train
  €360m first contract

- Rolling stock - Coradia ILint

- New platform - Aptis

- Systems - Hesop
  99% of recoverable energy captured
  Now extensively used worldwide

- Services - Health Hub

- Signalling - Fluence
  World first driverless-to-driveless metro

Alstom assets

- Long-term customer intimacy
- Dynamic entrepreneurial culture
- 7,000 engineers, 2/3 software
- A strong ecosystem with key partnerships

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Six priority innovation areas to respond to mid and long term business drivers

**GREEN MOBILITY**

1. Green traction
2. Eco-design and manufacturing

**SMART MOBILITY**

3. Autonomous train
4. Multimodality and Flow management
5. Data driven rail mobility
6. Road electromobility

LEAD IN GREEN AND SMART SOLUTIONS
Efficiency, powered by digital

A TOP PRIORITY FOR THE GROUP

2020 objective of 7% aEbit margin reached

Thanks to:

- Sourcing cost reduction – €250m
- 60% of manufacturing in best cost countries
- Strong project execution and SG&A control
- Volume and mix effect

Additional levers

- Digital transformation
- Footprint stabilisation & optimisation
- Best-in-class project execution, including cash focus

On top of natural drivers

- New platforms gaining in competitiveness
- Learning curve of our recent manufacturing and engineering sites

INDUSTRY LEADING MARGINS AND CASH GENERATION
## Environment and social impact at the heart of our strategy

### 2025 targets

1. **ENABLING**
   - decarbonisation of mobility
   - 25%\(^1\) energy reduction in solutions (CO\(_2\))
   - 100% electricity supply from renewables

2. **CARING**
   - for our people
   - Total recordable injury rate at 2
   - 25% Women in management & professional roles
   - Global **Top Employer** certification

3. **CREATING**
   - a positive impact on society
   - 100,000 beneficiaries /y from local actions
   - 100% of newly developed solutions eco-designed

4. **DEVELOPING**
   - ethical and sustainable supply chains
   - 100% of suppliers monitored or assessed for compliance on CSR standards and E&C practices

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\(^1\) Compared to 2014
Clear financial objectives for 2022/23

Sales average annual growth rate of around 5% over 2019/20 to 2022/23

aEBIT margin\(^1\) around 9% in 2022/23

Above 80% Net Income\(^2\) to FCF\(^3\) by 2022/23

Sustainable shareholder return: 25 to 35% dividend pay-out as of 2019/20

\(^1\) Including CASCO JV share of net income
\(^2\) Net profit from continuing operations attributable to equity holders of the parent
\(^3\) Nota: Free cash flow generation is subject to usual short-term volatility linked to customers down payments and milestone payments from customers under new IFRS standard (IFRS15/IFRS16)
Finance

Laurent MARTINEZ - CFO

2019 Capital Markets Day
Alstom 2020 achievements
2020 Strategy largely a success - Alstom Financial Achievement

- Backlog: strongest industry backlog
- Growth to €8.1Bn sales
- Raised margin to 7%
- Growing FCF generation

### Backlog (in € billion)
- FY 2015/16*: 30.4
- FY 2018/19: 40.5
- +33%

### Sales (in € billion)
- FY 2015/16*: 6.9
- FY 2018/19: 8.1
- CAGR 5.5%

### aEBIT (in € million)
- FY 2015/16*: 366
- FY 2018/19: 570
- +1.8 pt

### FCF (in € million)
- FY 2015/16**: (-326,0)
- FY 2018/19: 153,0
- +479m

** FY 2015/16 excl. extraordinary DOJ fine for ca. (720)m and discontinued (1,568)m

* as per IAS11 standards

** ALSTOM – 24/06/2019 – P 34

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Delivering Margin Expansion

- **Volume/Price**
  - Solid top line growth
  - Partly offset by pricing dynamics

- **Portfolio/Mix**
  - Reaching 60% sales on Services / Signalling / Systems
  - New products development

- **Operational excellence**
  - Sourcing savings
  - Global footprint (India, Poland)
  - Project delivery excellence

5.3% \( \rightarrow \) 7.1%  
\( * \) as per IAS11 standards
Alstom Success Foundation: Tender and Project Execution

- Sound Management of 500 projects portfolio
- Continuous progression in Margin on Order Intake
- Robust project execution: uplift on margin at completion on projects portfolio over last 8 semesters

**Gross Margin% on Orders Intake**

<table>
<thead>
<tr>
<th>FY 2015/16</th>
<th>FY 2016/17</th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
</tr>
</thead>
</table>

**Margin at completion increase**

*On projects portfolio*

<table>
<thead>
<tr>
<th>FY 2015/16</th>
<th>FY 2016/17</th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
</tr>
</thead>
</table>

Strong Project & Risk Management DNA
Creating Value with JV and Partnerships

Diversified partnership & acquisition:

- CASCO: access to Chinese Market
- TMH: strategic partnership / access to Russian market

<table>
<thead>
<tr>
<th>Region</th>
<th>JV/Partnership Description</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>TMH (trains &amp; services)</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>Casco (Sig)</td>
<td>49%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>EKZ (locos)</td>
<td>75%</td>
</tr>
<tr>
<td>South Africa</td>
<td>Gibela (trains)</td>
<td>61%</td>
</tr>
<tr>
<td>India</td>
<td>Madhepura (locos)</td>
<td>74%</td>
</tr>
<tr>
<td>Morocco</td>
<td>Cabliance (cabling)</td>
<td>100%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Nomad Digital &amp; 21Net (connectivity)</td>
<td>100%</td>
</tr>
<tr>
<td>France</td>
<td>Easymile (driverless shuttles)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speedinov</td>
<td>50%</td>
</tr>
<tr>
<td>South Africa</td>
<td>Gibela (trains)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Easymile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speedinnov</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- EasyMile: Smart Mobility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Nomad and 21Net: On Board Connectivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Speedinnov: High Speed Development</td>
<td></td>
</tr>
</tbody>
</table>

* Excluding JV Energy

in € millions

<table>
<thead>
<tr>
<th>Year</th>
<th>Share in Equity</th>
<th>Share of net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>15/16</td>
<td>(7)*</td>
<td>352*</td>
</tr>
<tr>
<td>18/19</td>
<td>89*</td>
<td>711</td>
</tr>
</tbody>
</table>
Sustainable Working Capital Performance

**Down Payments position (in € billion)**

<table>
<thead>
<tr>
<th></th>
<th>FY 2015/16</th>
<th>FY 2016/17</th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down payment B/S position</td>
<td>2.0</td>
<td>2.3</td>
<td>2.2</td>
<td>2.3</td>
</tr>
<tr>
<td>Order intake</td>
<td>10.6</td>
<td>10.0</td>
<td>7.2</td>
<td>12.1</td>
</tr>
</tbody>
</table>

**Working Capital Change (impact on FCF) (in € million)**

<table>
<thead>
<tr>
<th></th>
<th>FY 2015/16</th>
<th>FY 2016/17</th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital Change</td>
<td>(84)</td>
<td>127</td>
<td>91</td>
<td>(12)</td>
</tr>
<tr>
<td>Impact on FCF</td>
<td>+€100m</td>
<td></td>
<td></td>
<td>€(100)m</td>
</tr>
</tbody>
</table>

- **Stable Down Payments position**
- **Limited Working Capital fluctuation**
- **Sustainable negative Working Capital (ca. 20% of Sales) driven by customer payments phasing**

Nota: FY15/16 and FY16/17 under IAS11 FY17/18 and FY18/19 under IFRS15
Strong Balance Sheet post 18/19 Dividend – Foundation for next phase

- Dividend of 5.5€ per share proposed by Board of Directors
- Strong net cash position allows growth and investment
- Solid rating: Baa2
- Access to bank guarantees at competitive price

Net Cash / (Debt) (in € million)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Cash at 31 March 2019</td>
<td>2,325</td>
</tr>
<tr>
<td>(Debt)</td>
<td>(1,230)</td>
</tr>
<tr>
<td>Dividend distributed</td>
<td></td>
</tr>
<tr>
<td>Net cash remaining after dividend pre IFRS 16</td>
<td>1,095</td>
</tr>
</tbody>
</table>

IFRS 16 adjustment between €400m and €500m
AiM financial framework
Alstom’s Strategic Framework

We AiM to • • •

GROWTH
by offering greater value to our customers

INNOVATION
in smarter and greener mobility solutions

EFFICIENCY,
powered by digital

One Alstom team, driven by Agile, Inclusive and Responsible values

Sales step up  |  Future growth & competitive edge  |  Margin expansion & Cash Generation
Growing Sales Sustainably Above Market

- Record €40Bn backlog securing €16.5-17.5Bn sales over next 3 years
- Boost Signalling sales
- Foster Services momentum
- Revenue from Services and Signalling to reach 40% by 2022/23
- Build on Rolling Stock and Systems capabilities
- Softer FY 2019/20 due to Middle East large system projects phasing

Sales step up: Average annual growth rate of around 5% over 2019/20 to 2022/23

Nota: Graph for illustrative purpose
Boosting Signalling Performance

- **Signalling growth drivers**
  - European Mainline signalling
  - Global urban market
  - Services on installed base
  - Innovation

- **Margin expansion drivers**
  - R&D efficiency & standardisation
  - Bangalore engineering footprint
  - Casco contribution

*Nota: Graph for illustrative purpose*
## Services momentum accelerated - additional value delivered to operators

### Services growth drivers
- Record backlog of €13.5Bn
- Long term maintenance services contracts, parts, green modernisation
- Alstom unique added value on reliability & availability

### Margin drivers
- Sourcing efficiency
- Design for maintenance & services
- Digital services & predictive maintenance

### High margin, low risk, low capital intensity Business model
Leading Rolling Stock and System Performance

- **Systems dynamics**
  - Systems sales softening after peak activities in 2018/19
  - Opportunities in Middle East & Latin America
  - Unique Alstom turn-key experience & capability

- **Rolling stock growth drivers**
  - Renewed product portfolio on Rolling Stock
  - Innovative products: H2 train, eBus
  - Market momentum: Europe, North America, India...

- **Rolling stock margin expansion drivers**
  - Sourcing performance
  - Footprint: Best costs countries expansion

Leveraging our global reach & renewed product portfolio

Sourcing performance

Sales from Rolling Stock

Sales from Systems

Nota: Graph for illustrative purpose
Committed to Create Value Through Innovation

- R&D costs growing at the same pace as sales (around 5%): stable R&D / sales ratio
- Harvesting on current platform generation on Rolling stocks
- Prioritised innovation axes
  - Green mobility: H2 train and eBus
  - Signalling product development
  - Very high speed (TGV du futur – co financed with ADEME)
  - SMART mobility

**Investment fire power focus on future growth**

€291m

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D Costs</td>
<td>€90m</td>
<td>€96m</td>
<td>€102m</td>
<td>€108m</td>
<td>€114m</td>
</tr>
<tr>
<td>As % of Sales</td>
<td>4%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Nota: Graph for illustrative purpose
Uplifting margin to Benchmark Level

- **Volume/Price**
  - Sustainable top line growth
  - Consistent price dynamics trends

- **Portfolio Mix**
  - Growth towards Services & Signalling (toward 40% of sales in 2022/23)

- **Operations Performance**
  - Sourcing savings (60% Best cost countries)
  - Global footprint extension (60% Best cost countries)
  - Standardisation & efficiency in execution

**Profit boost by 150 bps to around 9% aEBIT margin**

* including CASCO JV share of net income

Notas: Graph for illustrative purpose.
Deliver EPS growth

- EPS growth driven mainly by EBIT step up
  - Restructuring almost completed, returning to normative level
  - Financial expenses reduced by bonds repayment
  - Effective Tax Rate between 25 and 30%, benefiting from Deferred Tax Asset
  - Long Term Incentive payout to be implemented through Share Buy-back

EPS ramp-up boosted by operational performance and balance sheet discipline

Nota: Graph for illustrative purpose
Driving Performance through Cash Focus Programme

Programme Architecture

- **Key drivers**
  - Tender
    - Progress payment & Working Capital optimisation
  - Inventory
    - 20% reduction of testing duration
    - 15% Hard Inventory coverage reduction
    - Vendors Managed Inventories implementation
  - Sourcing / supply chain
    - Payment terms & Supply chain right in time

- **Transformation enablers**
  - Cash training, culture, & process aligned
  - Management incentives aligned to FCF generation & FCF / Net Income

Step up Cash performance as a company wide target
Cash Focus: Prioritising Capex

- Transformation capex to end in 2019/20: no new industrial hub creation
- Capacity increase in Best cost countries
  - Sri City (India)
  - Katowice (Poland)
- Capex prioritised to efficiency drivers
  - Machining capacity
  - Robot welding
  - Factory 4.0
- Decrease from 2 to 2.5% over sales for 2 years to ca 2% of sales on mid-term

Prioritised capex geared to growth & efficiency – towards 2% of sales

Nota: Specific projects jigs & tools accounted for in Capex under the new IFRS15 standards since 18/19
## Cash Focus: Working Capital Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Working Capital from Backlog</th>
<th>Working Capital from New Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2018/19</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>FY 2019/20</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>FY 2020/21</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>FY 2021/22</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>FY 2022/23</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

- Stable Down payment on average
- Inventory to ramp up over next 2 years
- Impact of Cash Focus stringent actions
- Mid-term Target: working capital stability

Working capital subject to customary short term volatility related to down payments & progress payments

€(1.7)Bn

- Working Capital from Backlog
- Working Capital from New Projects

### Working capital fostered by Cash Focus – towards mid term stability

Notat: Graph for illustrative purpose
Delivering FCF Performance

FCF key drivers
- EBIT growth driven by volume & margin expansion
- Working Capital: inventory impact during 2 years, and stable mid-term target
- Capex stabilising to 2% of sales
- Financial cash out benefiting from bonds repayment
- Tax cash out supported by tax losses carried forward

Subject to customary short term volatility related to down payments & progress payments phasing

Committed to FCF generation – Targeting FCF / Net Income\(^1\) ratio above 80% by 2022/23

\(^1\)Net profit from continuing operations attributable to equity holders of the parent
Nota: Free cash flow generation is subject to usual short-term volatility linked to customers down payments and milestone payments from customers
Nota 2: Graph for illustrative purpose
Disciplined M&A Policy

Medium to small acquisitions contemplated for the coming years

Bolt-on acquisitions and partnership to enter new market segments or countries

Opportunities in all areas of our core business & digital

Disciplined M&A to accelerate growth & value creation - EPS Accretive target
**Capital Allocation Policy & Shareholder return**

**FCF improvement**

- Disciplined M&A
- Strong Balance Sheet
- Sustainable Shareholder return

- Strong net cash position maintained to sustain growth
- Solid investment grade rating maintained
- Sustainable shareholder return: 25 to 35% dividend pay out as of 2019/20
We Aim at value creation

GROWTH
by offering
greater value
to our customers

INNOVATION
in smarter and
greener mobility
solutions

EFFICIENCY,
powered by
digital

Sustainable shareholder return: 25 to 35% dividend pay-out as of 2019/20

Sales: average annual
growth rate of around 5%
over 2019/20 to 2022/23

Disciplined M&A
and investment policy

Mid term target:
aEBIT margin\(^1\) around 9% in 2022/23
above 80% Net Income\(^2\) to FCF\(^3\) by 2022/23

\(^1\) Including CASCO JV share of net income
\(^2\) Net profit from continuing operations attributable to equity holders of the parent
\(^3\) Nota: free cash flow generation is subject to usual short-term volatility linked to customers down payments and milestone payments from customers.

Under new IFRS standard (IFRS15/IFRS16)
Key Take Aways

- Well positioned in a growing market, supported by an industry-leading backlog, a global footprint and range of products / services
- Translating in industry-leading margins and cash flow generation
- Significant firepower to implement disciplined M&A and innovation
- Management focus on executing backlog & financial strategy
- Sustainable shareholder return policy

![EPS Growth](image1)

![FCF Growth](image2)
Efficiency
Thierry BEST – Operations SVP
2019 Capital Markets Day
Alstom in Motion 2019-2023: Efficiency

Alstom 2020
(2016 - 2019)

- Sourcing Saving at €250m/y
- 60% of train manufacturing outside Western Europe
- 3Mhrs ENG in India

Key targets hit:

Digital transformation

-15% development lead time
30% of engineering in India
60+% sourcing & operations in Best Cost Country
-15% hard inventory coverage

Key targets:

Alstom in Motion
(2019 - 2023)

- Footprint globalisation
- Low Labor Cost
- Country Extension

Footprint stabilisation and optimisation

Best-in-Class Project Execution
Digital Transformation: Engineering

- Fully digitalised development from R&D to project execution
- Digital design reviews with state-of-the-art 3D technologies

4 months development cycle time reduction demonstrated on metro projects

15% reduction on development cycletime
Digital Transformation: Industrial Operations

Smart Operations

- Parts 3D printed
- Connected Workforce
- Digital Supply Chain
- Manufacturing automation (Ubunye – SA)
- Virtual Training welding and painting
- Manufacturing Execution System
  - Digital works instruction and monitoring

3D printing
- Extensive use for jigs and prototypes allowing 80% leadtime reduction

Welding robot in Le Creusot
- -20% on bogie frame cost

Up to -10% Manufacturing hours

Le Creusot - FR welding robot
Alstom Digital Suite covers every process:
- Tendering
- Engineering
- Manufacturing Execution System
- Quality Execution System
- Service Execution System
- Supply Chain
- HR
- Global Single Instance (GSI) - ERP core model

Integrated Data Management supporting KPIs generation

75% digitalised processes

GSI Roll Out Planning

- FR: 100%
- APAC: 100%
- NAM: 100%
- MEA: 60%
- EUROPE: 50%
- LAM: 30%

- Alstom Suite deployed worldwide
- 70% company turn over covered by GSI
- Deployment to be completed by 2022
Digital Transformation: Use Case TGV2020

Extensive use of digital and new technologies

Manufacturing Execution System
Digital worksinstruction and monitoring

Virtual Training
welding and painting

3D printing:
2% of parts ambition

-25%
Manufacturing hours vs previous generation

Parts handling
with Cobot

Welding automation

E-BoM / 3D
Footprint Stabilisation and Optimisation: Rolling Stock Engineering

Engineering

- Site specialisation by product
- Engineering hub in Bangalore & Saint-Ouen to serve all projects
- Creation of centers of Excellence for critical subsystems

30% Engineering hours in India

RS Engineering Sites
Engineering Hubs
Centers of Excellence
Footprint Stabilisation & Optimisation: Sourcing

- **Standardisation**
  - Design To Cost (DTC) involving suppliers
  - Components catalogue

- **Massification**
  - “Alliance” program with selected suppliers
  - Bundling from new built to aftersales
  - Supplier base rationalisation

- **Best Cost Countries**
  - Increasing Local Supplier Bases

**Recent achievements**

**DTC** with supplier for intercity brake architecture

**Local Supplier Base**: new supplier in Mexico for electrical Panel: 20% competitiveness

60% Sourcing in Best Cost Countries
Footprint Stabilisation & Optimisation: Industrial Operations

Current Status
Completed set-up of Regional and Best Cost Country footprint
  New sites
  Ramping up

Mid term goal
Sites per region specialised in upstream operations allowing automation and capacity increase
  Network of agile sites dedicated to final assembly close to customer

Upstream hub
Final Assembly Unit

60% hrs Manufacturing in Best Cost Countries
Footprint Stabilisation & Optimisation: Use case Sydney Project

Worldwide organisation serving Sydney Project

Project Set up: 20% savings vs previous organisation

- Europe ➔ EXPERTISE
- India ➔ EXPERTISE & COMPETITIVENESS
- Sydney ➔ CUSTOMER INTIMACY & MAINTENANCE CONTRACT OVER 15y
Best-in-Class Project Execution

From Sound Project Execution

High level of collaboration and agility between sites
On-Time-Delivery improved by 15%

To Lean and Industrialised project management

500 projects
Enhanced project management processes and Tools securing full continuity from tender to Project deliveries

Customer Satisfaction
Further OTD improvement by 5%

PRASA
(Regional - South Africa)
- 20 trains delivered from Brazil
- 7 trains delivered from South-Africa

AMTRAK
(HighSpeed - USA)
- 2 first trains in progress in the US as per plan
Cash Focus

Key Axis

- Vendor Managed Inventory
- Optimise production line balancing
- Testing duration reduced by 20%
- Processes Cash focused from opportunity to project execution
- Enhanced training program for all functions

La Rochelle Vendor managed inventory → 15% Hard Inventory Decrease

TGV2020 Production line optimisation → Manufacturing: -25% hours and -33% leadtime

Efficiency and Agility to Generate Profitability and Cash
Alstom in India

Ling FANG – APAC SVP

2019 Capital Markets Day
Alstom in India
An Established Footprint

- **India**: key contributor to Alstom strategy with high standard sites for R&D, engineering and manufacturing
  - **Bangalore**:
    - Alstom’s largest engineering center for Rolling Stock & Signalling
    - → 22% of global engineering workload
  - **Coimbatore**:
    - Global traction manufacturing site
    - → 18% of global traction manufacturing workload
  - **Sri City**:
    - Metro manufacturing facility, serving customers worldwide
    - → Installed capacity of 20 Cars / month
  - **Madhepura**:
    - Loco manufacturing facility dedicated to domestic market

**Total 4,040 Employees**

- **Bangalore**: 2,900 Employees
- **Coimbatore**: 370 Employees
- **Sri City**: 400 Employees
- **Madhepura**: 370 Employees

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Alstom in India
A Proven Track-Record

- **Metro RS:**
  a proven Track-Record of Projects executed from India, to address Domestic & Export Markets:
  - **Chennai, Kochi, Lucknow, Sydney,** successfully commissioned
  - **Montreal, Mumbai** in execution

- **Signalling:**
  global involvement in both Urban & Mainline projects:
  - **Urban:** Design Lead in 17 projects, both in Domestic & Export Markets
  - **Mainline:** Design Lead in India, Design Support in major Export Projects

**LUCKNOW – €150m**
- Rolling Stock
- Signaling

1st completed "Make in India" project
1st Train delivered in 14 months

**HONG KONG SIL – €37m**
- Signaling

1st Driverless (GOA4) Alstom solution deployed from Bangalore
World-class manufacturing facilities, for metro RS and components

Established supplier base in India, with high focus on quality:
- Fostering local presence of our Global Supplier panel
- Growing local Indian supplier base with strong technical support from Alstom

Bangalore as innovation hub & center of excellence:
- Center of Excellence in 7 domains (Software Factory, Sig U200 & U400 activities…)
- 200 World Class Experts, 30 patents incubated

Manufacturing Workload in million hours:
- 2015: 0.3
- 2019: 0.7
- 2023: 2

Evolution of Indian Content (Metro Projects):%
- 2015: 30%
- 2019: 70%
- 2023: 80%

Engineering Workload in million hours:
- 2015: 0.8
- 2019: 3
- 2023: 5
Alstom in India

*India, Unmatched Differentiator for Alstom*

- **A skilled & abundant workforce:**
  - 2nd most populated country in the world with 1.3bn people in 2017 (1.5bn by 2030)
  - 63% of the population below 35 years
  - Increased focus on education; English proficiency

- **A competitive workforce:**
  - Indian competitiveness serving Alstom global profitability

- **A promising market:**
  - Average GDP growth of 6-7% since 1991 economic liberalisation
  - Rapid urbanisation & willingness to develop modern Infrastructures

---

**Higher Education Enrolment (%):**

- 2000: 10%
- 2010: 18%
- 2017: 27%

**Labor competitiveness**

- India: 1
- China: x1.5
- W-Europe: x4.2

*Source: BCG competitiveness survey 2018*

11 Cities with Metro Lines in Operation
7 additional Cities with Metro Lines under construction / in pipeline
Questions & Answers

2019 Capital Markets Day
Lunch Break

2019 Capital Markets Day
Signalling

Jean-François BEAUDOIN – Digital Mobility SVP

2019 Capital Markets Day
Railway Signalling Principles

Overall Architecture

3 MAIN BENEFITS FOR CUSTOMERS:
Ensure safety, Optimise performances & Improve quality of service

Route control
Wayside equipment
Equipment on the wayside to:
- Adjust Route
- Communicate with driver

Route control
Interlocking
Equipment to manage priority to prevent collision

Train protection
Trackside
Equipment on the wayside to:
- Detect train
- Compute Movement Authority

Train protection
On-board
Equipment in the train to:
- Manage speed
- Assist driver

IT for rail
Control Center
Equipment to monitor train lines, manage traffic, inform passengers monitor security functions & Scada: power supply, etc.

SAFETY EQUIPMENTS
NON SAFETY EQUIPMENT
Complete & versatile portfolio covering all signalling sub-systems for Mainline & Urban

Last generation integrated systems & strong legacy knowhow enabling ability to manage new built & re-signalling

Extensive Standalone Solution Portfolio & Integrated Systems Capability
Signalling Market Overview
Global volume increase, Stable segment breakdown

Accessible Market Segment Breakdown¹
UNIFE Accessible market

Accessible Market Geography Breakdown¹
UNIFE Accessible market

GLOBAL VOLUME DRIVEN BY MAINLINE, ESPECIALLY EUROPE WAYSIDE

- MAINLINE
  - Mainline Wayside (ATP Wayside & IxL): €12Bn
  - Over past years: 46%
- URBAN: 34%
- Freight & Mining: 8%
- Mainline Others: 6%
- Mainline Onboard: 6%

URBAN DRIVEN BY NEW-BUILT IN APAC & NETWORK REVAMPINGS IN EUROPE

- 2016-2018:
  - Europe: 6.0
  - APAC: 2.8
- 2021-2023:
  - Europe: 6.5
  - APAC: 3.4

CAGR ~2.5%

¹ Excluding Services
Source: UNIFE study 2018 & Company data

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Alstom Competitive Positioning

Main Signalling Players Revenue (2018)

- **Player #1**: >€2.5Bn
- **Player #2**: €1.8-1.9Bn
- **ALSTOM**: €1.4Bn
- **Player #4**: ~€1.2Bn
- **Player #5**: €0.8Bn

**5 GLOBAL SIGNALLING PLAYERS
ALSTOM IS #3**

Source: Company data & players’ publication, estimates comparing only signaling and telecom related businesses, including internal sales

ALSTOM AMBITION
Gain Product & Market Leadership
Strong Mainline Perspectives
Driven by Europe & ETCS upswing

Mainline addressable market 2019-2023 (avg/yr) (in €Bn)

<table>
<thead>
<tr>
<th>Europe</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Europe ~70% of Global Mainline market

Interlocking upgrade - Route control
● Sustained trend across Europe

ETCS roll-out - Train protection
● 10 to 15% coverage as of today
● Major near-term nation-wide deployments: NL, IT, DE

ALSTOM KEY ASSETS
● Strong track record in all segments...
  ▪ #1 on ETCS Onboard
  ▪ Interlocking homologated in 12 countries
  ▪ ETCS wayside deployed in 10 key countries

● …in major European markets

Unique expertise to deliver national roll-out:
Leadership in 1st nation-wide big-bang deployments (Denmark & Norway)

ALSOM – 24/06/2019 – P 82  Source: Company data & UNIFE

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Steady Urban Market Growth
Buoyant Global Demand

ALSTOM KEY ASSETS

Over €4Bn market per year

New lines construction
- Standalone market driven by 2 countries:
  - China over 10 lines per year
  - India over 20 lines in 15 cities within 5 years
- More than 8 turnkeys worldwide by 2023

Network revampings
- 10 cities with planned resignalling projects by 2023

ALSTOM largest world wide installed base

Revamping
- System & bundle
- New built

Largest world wide installed base

Revamping
- Network revampings
- 10 cities with planned resignalling projects by 2023

ALSTOM KEY ASSETS

ALSTOM – 24/06/2019 – P 83
Source: Company data & UNIFE

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Sustained Freight & Mining Trend
Primarily steered by North America

Product Business
- Private customers, mainly U.S. & Canada
- Short-cycle delivery framed in 5 to 10 yrs contracts
- Value-for-money driven & Specific operation features:
  - Remote location ➞ Lighter infrastructure
  - Harsh environment & climatic conditions
  - CAPEX reduction & OPEX optimisation incentive

ALSTOM KEY ASSETS
- Leader in North America Market
  Long-term cooperation with all “Class-I” rail road operators

- Best in-class products & Customer value innovation
  - Virtual block based systems
    ➞ Capacity increase without full resignalling
  - Next generation point machines
    ➞ Down time reduction to keep trains running
  - IoT & data analytics powered systems
    ➞ Predictive maintenance for maximum availability

- Operational excellence in short cycles management
  - High-performing supply chain
  - Quality of service & responsiveness

Source: Company data
A Unique Global Footprint
Competitive & Customer-focused

- 7,000 Employees
- Amongst which 4,500 Engineers

- 2 development hubs: Europe & Bangalore
- Customer-centric deployment teams across the globe

2,000 engineers by 2023

A global footprint ready to address all markets

Alstom Signalling Headcount (2019)

- **Europe**: 2,850 Employees
- **North America**: 800 Employees
- **Middle East Africa**: 200 Employees
- **Latin America**: 500 Employees
- **Asia Pacific**: 1,650 Employees
- **Casco JV**: 1,750 Employees
- **Bangalore**: 1,250 Employees

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Innovating towards Competitiveness & Efficiency
Platforming Approach

1 single trackside computer & associated object controller family
for all applications in all countries

**Convergence**

**HARDWARE & SOFTWARE PLATFORMING**

**ROUTE CONTROL**

**Principle**
- Applicative software
- Vital computer
- Object controller

**Historical**
- Bools
- CLC
- SmIO 24 V
- Bools / SSI
- CLC / 2003
- SmIO OC
- State charts
- 2003
- SmIO 24 V

**Today**
- Bools State charts SSI
- MooN
- SmIO OC

**ECONOMIES OF SCALE (product cost)**
ENGINEERING FOCUS ON FEWER TECHNOLOGIES

**1ST DEPLOYMENTS**

Urban: Singapore Thomson line & Riyadh
Mainline: Argentina Roca line – Route control application
Italy Roma & Fortezza line – Train Protection application
Innovating towards Competitiveness & Efficiency

**Digital Processes**

- **Digital Twins**
  - Advanced systems lab tests thanks to "virtual replica" of all equipments & their functions

- **Cloud-based testing**
  - Internet-based platform to boost our capacity & ease multi-sites deployments: software testing from anywhere at anytime

**Strengthened simulation capacity**
- Early, quicker & advanced system tests from any location

**Cloud vs internal test bench cost**
- $+25$

**Data verification lead-time**
- $+2$ per project

**Speed up delivery**
- Reduce # of engineering hours
- Reduce capital & operating costs
Leading Technology Breakthrough
More than 15 years track-record

**MAINLINE**

1st ERTMS L2 deployment for very high speed 300kph – no conventional system back-up (Italy)

1st ERTMS L2 deployment for high density line 2 minutes headway – 270 trains/day (Switzerland)

1st ERTMS L2 deployment for cross-border service (Germany/Belgium)

1st Intercity Automatic Train Operation (with Casco, China)

1st ERTMS L2 baseline 3 deployment incl. Maintenance release (Germany)

**URBAN**

2003  1st CBTC for heavy metro (Singapore NEL)

2005

2006

2008  1st revamping upgrade to CBTC (China, Beijing L2)

2009

2016  1st CBTC over LTE (China, Wuhan L6)

2017
Creating customer value through digital technology
Towards “Digital Train”

- **Energy efficiency & System performance**
  - ATO over ETCS L2 pilot (Netherlands)

- **Driving automation**
  - SNCF Driverless freight train pilot

- **Ultra-availability & ultra-capacity**
  - URBALIS Fluence: first train-to-train concept

- **Energy saving**
  - Up to 40%

- **Capacity increase**
  - Up to 20%

- **Prototype by 2023**

- **Advanced operational flexibility**

- **Reduced OPEX**

Smarter trains, lighter infrastructure

Compared to conventional CBTC
Boost our Service Offering to Drive Value

**Market evolution**

- Market Size: €3.9bn
- Obsolescence as increasing issue
- Legacy systems with low flexibility
- Increasing cyber vulnerability
- Synergies with Infra maintenance

**Alstom ambition**

- Increase share of long-term Maintenance (Level 1-3)
- Supply and repair excellence
- Full lifecycle partner

---

**CLEAR ROADMAP**

1. Integration into Global Parts Governance
2. Advanced diagnostics & monitoring solutions
3. Pro-active Obsolescence services / Virtualisation
4. Legacy-specific lifecycle support for configuration, performance and interface adaptations
5. Cybersecurity support
Conclusion
Achieving 2023 Ambition

Strong market perspectives
for Alstom unique portfolio & knowhow

GAIN PRODUCT & MARKET LEADERSHIP

North America
Freight & mining

Europe Mainline

Global Urban

Global reach
4 Levers

Innovation towards Competitiveness & Efficiency

Create Customer value through digital technology

Boost Services

1 2 3 4
Services

Bernd BURGSTAHLER – Services VP

2019 Capital Markets Day
### Services at Alstom

*Already strong market position thanks to a diversified portfolio of solutions*

<table>
<thead>
<tr>
<th>Diverse portfolio</th>
<th>Wide coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts</td>
<td>4,000 customers with 25% coverage of installed fleet</td>
</tr>
<tr>
<td>Maintenance</td>
<td>13,000 vehicles, 139 depots in 41 countries under contract</td>
</tr>
<tr>
<td>Modernisation</td>
<td>10,000 traction systems and 5,000 vehicles modernised</td>
</tr>
<tr>
<td>Signalling Services</td>
<td>40 ongoing Service contracts</td>
</tr>
</tbody>
</table>

**Leader in services among OEMs**

- **Service:** highest growth and profitability contribution
- **Long-term contracts** with exceptional high rate on contract renewals and repeat orders

---

1 Except CRRC home market
Long term growth
Orders and sales historically outperforming the market

Solid growth
Alstom Services Orders and Sales in €m, CAGR in %

Strong shares of services in Alstom sales and backlog

KEY RESULTS

- Alstom orders and sales outperforming the market
  - Sales CAGR: double the market growth
  - Orders CAGR: x5 market CAGR
  - Book-to-bill of 1.6 over the last 5 years

- Strong service penetration in Alstom portfolio
  - Service share constantly increasing
  - 32% Service in total backlog (€40.5bn)
Value creation through innovation and technology
To achieve this leadership position we’ve developed innovative solutions with strong customer benefits

Integrated Digital solutions...

Condition monitoring

Health Management

Fleet Support Centers

... Creating benefits for customers

Improved reliability

- 40%

Decreased in-service breakdowns
(# of SAF on reference solution)

Increased availability

- 20%

Reduced maintenance time
(# of hours/train in depot)

Cost savings

- 15%

Reduced lifecycle costs
(€ per km)

Source: Selected Projects versus Reference Solution
Value creation through customer focus
From "vendor" to "solution provider“ – Example ITALY

**2008/09**
Alstom Service Italy

- Under 100 empl.
- Only gardening
- Parts and Repairs

From "Sender“ ...

**2018/19**
Alstom Service Italy

- Over 1,000 empl.
- 6 Full-Service Contr.
- Complete Portfolio

...to "Solution Provider"

**SALES X 5**

- Growing expertise
- Building digital solutions
- High value services

**Partner to NTV** on fleet maintenance & depot ➔ establish 1st private VHS Operation

**Partner to TRENITALIA** on maintenance ➔ focus on passengers and international expansion

**Partner to RFI** on Signalling maintenance ➔ improve LCC and reliability
Our ambition: becoming the undisputed leader
Acceleration plan in services to keep on growing profitably

2018/2019
BUILDING A LEADERSHIP POSITION IN SERVICES
Sales and orders growth outperforming the market
Building innovative and customer-centric solutions

2022/2023
CONTINUING PROFITABLE GROWTH IN CORE AND NEW SOLUTIONS TO BECOME THE UNDISPUTED LEADER
Increase service contribution to group sales
Most attractive high-value services and best geographical presence including as well Non-Alstom fleets
Very strong market potential
Existence of large untapped pools and key long-term drivers enable profitable growth

Large untapped pools...

<table>
<thead>
<tr>
<th>Segment</th>
<th>Value (€Bn)</th>
<th>% of Global Rail Service Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Parts</td>
<td>24.6</td>
<td>23%</td>
</tr>
<tr>
<td>Freight Maint.</td>
<td>1.6</td>
<td>77%</td>
</tr>
<tr>
<td>Non-accessible</td>
<td>25.8</td>
<td>67%</td>
</tr>
</tbody>
</table>

- 9.2
- 16.3
- 24.6
- 1.6
- 25.8

€78Bn

- 58%
- 60%
- 23%
- 67%

- 42%
- 40%
- 77%

Maint. Signaling 42% Maint. Infra 40% Parts 23% Modern. Maint. Rolling Stock 67% 12% Freight 22% Passenger

...and strong growth drivers

Liberalisation
- New market entrants
- Maintenance outsourcing
- Traffic increase

Operators looking for more efficiency
- Performance contracts
- TSSSAs

Emerging new value-added services
- Technology-driven solutions
- Data Services
- Cybersecurity

1 Non-accessible: e.g. because of political entry barriers (China) or inhouse policy of National Operators
Source: UNIFE 2018

Market Segments of global Rail Service Activities
Key attributes
Alstom can leverage some tangible assets to meet its ambition

- Large installed base
  - + 50,000 Alstom vehicles in Service

- Customer Intimacy
  - Best in class local presence

- Cutting-edge technology
  - Condition Monitoring and Prognostics with Healthhub

- Highly-skilled workforce
  - + 7,000 Technical experts in services worldwide
Growth strategy
Focused on four high-value opportunities

1. Open new revenue streams in parts
2. Expand our leadership position in maintenance through operational excellence and digital
3. Enhance our position on green modernisation

Continued growth in core solutions and new solutions
Market evolution

- Market Size: €19Bn
- Suppliers extending their offering to service
- Increasing dynamic on buyers’ side

Alstom ambition

- Increase coverage on Alstom and non-Alstom fleets
- Reduce cash in material
- Shorten repair loops (localisation)
- Improve margin (efficiency and pricing policy)

CLEAR ROADMAP

1. Worldwide integrated organisation
2. Smart diagnosis tools and localisation of repairs
3. Strengthening of Alstom IP rights / co-developments
4. Entering into new revenue streams, like e.g. commodities, 2nd tier equipment & overhauls
Expand our leadership position in maintenance

Market evolution

- Market Size: €8.6Bn
- Various schemes: bundle with RS, O&M, PPPs
- System Maintenance growing (full TCO evaluation)
- Technology push (remote data access and AI for analytics & prognostics)

Alstom ambition

- Preferred Partner for Operators
- Further increase backlog with long-term contracts
- Value selling of HealthHub solutions (Gain sharing)

CLEAR ROADMAP

1. Extend Prognostics & Health Management
2. Full coverage with Fleet Support Centers
3. New partnering schemes on Leasing and Operating
4. Explore expansion in Freight Maintenance
Enhance our position on green modernisation

Market evolution

- Today’s Market Size: €0.6Bn¹, but high potential growth
  - CO₂-free requirements
  - Diesel Multiple Units becoming obsolete
  - Increased passenger expectations

Alstom ambition

- Become market reference for “green modernisation”
- Leverage on industry lead on Hydrogen solutions
- Excellence in contract execution

CLEAR ROADMAP

1. Partnering with Lessors / Roscos
2. Green re-tractioning
   - Smart power module exchange (GTO – IGBT)
   - Hydrogen conversions & extensions
   - Battery and Hybrid solutions

¹ Excluding Mid-life OVHs and w/o Diesel ban impact
Promising financial outcome
Revenues, earnings and cash increase

Revenues
- Penetration of large and growing markets

Margin
- Natural contribution of high value activity
- Increased value through digitalisation

Cash
- Low capital intensity, strong cash generation
Key takeaways

- Already in a leadership position in services among OEMs thanks to innovation and customer focus
- Outperforming the market growth for the past 10 years
- Growing business with large untapped pools
- Strong assets to be leveraged
- Clear roadmap to accelerate growth and profitability

Become the undisputed leader

Strengthen market position in high-value services

Increase Service contribution to group sales with positive impact on group profitability
Innovation
Marc GRANGER – CSO
2019 Capital Markets Day
A long history of value creation through innovation

Historically, Alstom at the forefront of innovation and technological progress in rail

1980's
First deploying Gate Turn-Off Thyristor in train systems

2000's
First large size and fully automatic metro in the world

2007
World rail speed record – 574.8km/h
And more recently new product launches to keep on differentiating

- Rolling stock - Coradia iLint
- New platform - Aptis
- Signalling - Fluence
- Services - Health Hub
- Systems - SRS
- Systems - Hesop
Renewed platforms with strong efficiency gains

Successful renewal of our platforms…

- Tramway: Citadis XO5 Alu
- Metro: Metropolis
- Regional: Coradia Stream
- High-speed: Avelia Liberty
- Locomotive: Prima H4

… with direct business impacts for our customers

<table>
<thead>
<tr>
<th></th>
<th>TGV du futur¹</th>
<th>Metropolis²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cost of ownership</td>
<td>-20%</td>
<td>-26%</td>
</tr>
<tr>
<td>Maintenance cost</td>
<td>-30%</td>
<td>-26%</td>
</tr>
<tr>
<td>Energy consumption</td>
<td>-20%</td>
<td>-20%</td>
</tr>
<tr>
<td>Passenger capacity</td>
<td>+20%</td>
<td>-4%</td>
</tr>
<tr>
<td>Variable production cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy consumption</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Efficiency gains compared to already existing high-speed trains
2 KPI for Metropolis Aluminium – Reduction since 2013

Leveraging these renewed platforms to expand our worldwide presence
And innovative business models and operational solutions

New business model ...  

IDENTIFICATION OF PARTS
ORDERING
DELIVERY

STATION ONE
The first online marketplace dedicated to the railway sector

... and solutions to improve efficiency

INDUSTRY 4.0
Implementation of cutting edge technologies into internal processes

AUTOMATION: HIGHEST-CAPACITY WELDING ROBOT
SMART GLASSES FOR REMOTE CONTROL
3D PRINTING
MANUFACTURING EXECUTION SYSTEM
QES: AUTOMATED TRACEABILITY IN PRODUCTION LINE
A continued R&D investment to drive innovation

A continued investment in R&D

R&D investments

2015/16 – 2018/19

4%-5% SALES\(^1\)

Leading in inventions and patents...

Patents: 6,500

Number of patent requests filed in 2018/19

Global innovators in 2018/19

Top 100

Top 20

Initiative to foster internal creativity

Yearly, company wide innovation contest

2018: 599 innovations submitted, 57 sites, 27 countries

Successful track record: HealthHub ™, Hesop ™, Coradia iLint ™

...And prestigious recognitions

Aptis: Innovation award at the Busworld trade show – 2017

Coradia iLint: GreenTech award 2018 in the category Mobility

Mastria: finalist at the Smart City Expo World Congress
New product offering opportunities

Mega trends
- Globalisation
- Sustainability
- Terrorism
- Urbanisation
- Gen Z
- Cybersecurity

Technological innovations
- Autonomy and new power sources
- Big Data / Analytics
- 3D printing
- Automation
- Networking & Communications
- Sensing
- AI and Machine Learning

Social and business model innovation
- Open platform ecosystems
- Crowdfunding
- Sharing economy
- Outcome economy
- Crowdsourcing

Creating "must-have" and new business opportunities

Green and smart mobility ambition
2019 – 2023: Six key innovation priorities in green and smart mobility

GREEN MOBILITY
1. Green traction
2. Road electromobility
3. Eco-design and manufacturing

SMART MOBILITY
4. Autonomous train
5. Data driven rail mobility
6. Multimodality and flow management

2019 – 2023: 6 key innovation priorities
A future growth driver…

-60% CO₂ emissions expected in transport by 2050 (vs. 1990)

Increasing number of cities declaring "Diesel ban"

Large portion of networks are likely to remain un-electrified (~50k km in France, UK and Germany)

…Already a challenge for Alstom clients

RMV will have the world’s largest fleet of fuel cell trains in passenger transport
Knut Ringat, MD

About 120 diesel trainsets in our vehicle pool will reach the end of their life time with in the next 30y, meaning we will have to replace them
Carmen Schwabl, MD

Ambition: Alstom as a key green player

Top sustainable train provider

COMPLETE PORTFOLIO
- Battery trains
- Hybrid trains
- Hydrogen trains

GLOBAL REACH
- Fast deployment in early adopter countries
- Expansion in 10 countries by 2025
Green traction

Comprehensive solutions to help reduce energy consumption

- **Rolling stock** – Silicon Carbide (SiC)
- **Systems** – Rail efficiency application

**Key impacts**

- Up to **- 20%** lower train energy consumption
- **- 12%** lower traction maintenance costs
- **+10%** better reliability
- **Noise reduction** on transformer and traction case

- **Strategic partnership** with Cosmo Tech
- A powerful simulation tool to improve the **global efficiency** of a rail system
- Optimisation of **energy consumption** and operational performance
Road electromobility

Aptis as a first step beyond rail mobility

Low carbon road mobility potential

- \(x^2\) Demand for mobility by 2050...
- \(+2\) CO\(_2\) emissions...
- ...and reducing air pollution in cities
- 90% EU people today live in areas exposed to non compliant air quality levels

A disruptive concept

- New architecture
- Improved passenger experience
- More maneuverable

A promising start

- Commercial successes
- Roadshows in more than 30 cities
- 95% availability

Towards autonomous drive implying system approach
Eco-design and manufacturing

Strengthening our carbon neutrality strategy

ECO-DESIGN

23% solutions in Alstom’s portfolio are classified as eco-designed

-17% energy consumption reduction since 2014

- 65% of newly developed solutions eco-designed

-23% energy consumption reduction in solutions

ENVIRONMENTAL EXCELLENCE IN MANUFACTURING

Now

-12.5% energy intensity reduction since 2014

40% electricity consumed in sites coming from renewable sources

2023

80% electricity consumed in sites coming from renewable sources
Autonomous train
On track to reach our strong ambition

Participation in EasyMile

Remote cab pilot

Driverless tram in depot

Autonomous train consortium

OUR OBJECTIVES

2021
Autonomous shuttle system in service

2022
Automatise first train depot

2023
Complete autonomous train prototype
Data driven rail mobility

Data leads to new range of digital solutions

Alstom Railway Data

Now

- +50 fleets supervised
- +2M train data per day
- +170 Bn of data in database

2025

- +100 fleets supervised (all assets)

... And combining all the mobility data & our expertise

Data from Alstom services

- Asset data
- Energy
- Infra
- Signaling
- Rolling Stock
- Passenger Data

Data from Alstom connected products

- Mobility Data
- Environment data
- Journey Data
- City Data
- Operation Data (ATS)

Data from Public Transport Operators

- CCTV
- Maintenance data
- Passenger Data
- Ticketing Data

... Lead to new digital solutions

<table>
<thead>
<tr>
<th>MAINTENANCE</th>
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<tbody>
<tr>
<td>Condition monitoring</td>
</tr>
<tr>
<td>Predictive maintenance</td>
</tr>
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<table>
<thead>
<tr>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic management</td>
</tr>
<tr>
<td>Energy management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY FLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility analytics within smart cities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic threat detection</td>
</tr>
<tr>
<td>Cybersecurity monitoring</td>
</tr>
</tbody>
</table>

WITH ALREADY SOME COMMERCIAL SUCCESSES
Data driven rail mobility
Innovative technology to build new solutions

Advanced technologies

- IoT sensor
- Big Data
- Artificial Intelligence
- Computer Vision
- IoT security & connectivity
- Container Automation

Mobility Data Platform Framework | Cloud & On Premise

- Mobility Data Operating System
- Data Science and Analytics for Mobility
- Reliable IoT for Railway
- Train and wayside Cyber Security

MOBILITY SOLUTIONS

- OPERATIONS
- MAINTENANCE
- SECURITY
- CITY FLOW
Multimodality & Flow management

**Mastria**

- **Coordinates** all public transport modes from **rail & road**
- **Offers alternative mobility solutions** rapidly in case of incidents
- **Optimises operations with mobility analytics**

**ON-GOING PILOTS IN PARIS AREA AND IN TUSCANY**

Mastria offers a next generation solution for multimodal city transportation (video)
Multimodality & Flow management
Exploring new emerging markets

- Complex transport systems, as currently available in rail, will emerge in road
- These new systems will first appear in public transportation
- City orchestration will emerge to improve mobility services and reduce congestion

- Complex transport systems, as currently available in rail, will emerge in road
- These new systems will first appear in public transportation
- City orchestration will emerge to improve mobility services and reduce congestion
2019 – 2023: Strategic enablers to support Alstom innovation priorities

6 innovation priorities

1. Multimodality and Flow management
2. Green traction
3. Eco-design and manufacturing
4. Autonomous train
5. Data driven rail mobility
6. Road electromobility

3 enablers

A. Data Innovation Factory
B. Open and agile innovation and partnerships
C. New business incubator
Open and agile innovation and partnerships

Green mobility
- Partnership signed in 2017
- Focus on technologies for electric and hybrid systems
- Joint contract in Germany on May 2019

Smart mobility
- Partnership signed in 2017
- Focus on cybersecurity of transport systems
- Investment in 2017
- Focus on electrical autonomous systems

Exploring new opportunities and attract talents

Start-ups
- kaster
- Systemx
- Shift2Rail
- CEA
- RAL
- DLR

Research institutes
- Massachusetts Institute of Technology
- Stanford University of Technology

Universities

BY 2023: STRENGTHEN AND MULTIPLY OUR PARTNERSHIPS AND OPEN INNOVATION INITIATIVES
R&D and innovation embedded in Alstom's organisation to sustain our leadership and build a new one in green and smart mobility

A new open and agile innovation mindset enabled by key capabilities: business incubator, data innovation factory, partnerships & ecosystem
Questions & Answers

2019 Capital Markets Day
Closing remarks

Henri POUPART-LAFARGE – Chairman & CEO

2019 Capital Markets Day
Closing remarks

On track to be THE LEADING GLOBAL INNOVATIVE PLAYER in our markets for a sustainable and smart mobility to create greater value for passengers, clients and shareholders

Leveraging the achievements of our 2020 plan
- Key player in all geographies and businesses
- Innovative, recognised, and diverse product portfolio
- Competitive offering and strong execution

Growing and stable market with opportunities
- Robust macro-economic drivers
- Positive rail market outlook - smart and green mobility momentum
- New trends and technologies creating new opportunities

Clear objectives, supported by a sound strategy
- Continue to outperform market growth – #1 or #2 in our markets geographies and lines of business
- Lead in smart and green solutions
- Industry leading margins and cash generation
Appendix 1 - Non-GAAP financial indicators definitions

This section presents financial indicators used by the Group that are not defined by accounting standard setters.

- **Orders received**
  A new order is recognised as an order received only when the contract creates enforceable obligations between the Group and its customer. When this condition is met, the order is recognised at the contract value. If the contract is denominated in a currency other than the functional currency of the reporting unit, the Group requires the immediate elimination of currency exposure through the use of forward currency sales. Orders are then measured using the spot rate at inception of hedging instruments.

- **Order backlog**
  Order backlog represents sales not yet recognised on orders already received. Order backlog at the end of a financial year is computed as follows:
  - order backlog at the beginning of the year;
  - plus new orders received during the year;
  - less cancellations of orders recorded during the year;
  - less sales recognised during the year.

  Order backlog corresponds to the transaction price allocated to the remaining performance obligations, as per IFRS15 standard quantitative and qualitative disclosures requirements.

- **Book-to-Bill**
  The book-to-bill ratio is the ratio of orders received to the amount of sales traded for a specific period.

- **Adjusted EBIT**
  When Alstom’s new organisational was implemented in 2015, adjusted EBIT ("aEBIT") became the Key Performance Indicator to present the level of recurring operational performance. This indicator is also aligned with market practice and comparable to direct competitors.

  Going forward (1st application for Half Year 2019/2020 publication), Alstom has opted for the inclusion of the share in net income of the equity-accounted investments into the aEBIT when these are considered as part of the operating activities of the Group (because there are significant operational flows and/or common project execution with these entities), namely the CASCO Joint Venture. The company believes that bringing visibility over a key contributor to the Alstom signalling strategy will provide a fairer and more accurate picture of the overall commercial & operational performance of the Group. This change will also enable more comparability with what similar market players define as being part of their main non-GAAP "profit" aggregate disclosure.

  aEBIT corresponds to Earning Before Interests and Tax adjusted for the following elements:
  - net restructuring expenses (including rationalization costs);
  - tangibles and intangibles impairment;
  - capital gains or loss/revaluation on investments disposals or controls changes of an entity;
  - any other non-recurring items, such as some costs incurred to realize business combinations and amortisation of an asset exclusively valued in the context of business combination as well as litigation costs that have arisen outside the ordinary course of business;
  - and including the share in net income of the operational equity-accounted investments.

  A non-recurring item is a “one-off” exceptional item that is not supposed to occur again in following years and that is significant.

  Adjusted EBIT margin corresponds to Adjusted EBIT in percentage of sales.
Appendix 1 - Non-GAAP financial indicators definitions

- **Free cash flow**
  Free cash flow is defined as net cash provided by operating activities less capital expenditures including capitalised development costs, net of proceeds from disposals of tangible and intangible assets. In particular, free cash flow does not include the proceeds from disposals of activity.
  The most directly comparable financial measure to free cash flow calculated and presented in accordance with IFRS is net cash provided by operating activities.
  Alstom uses the free cash flow both for internal analysis purposes as well as for external communication as the Group believes it provides accurate insight regarding the actual amount of cash generated or used by operations.

- **Net cash/(debt)**
  The net cash/(debt) is defined as cash and cash equivalents, other current financial assets and non-current financial assets directly associated to liabilities included in financial debt, less financial debt.

- **Pay-out ratio**
  The pay-out ratio is calculated by dividing the amount of the overall dividend with the “Net profit from continuing operations attributable to equity holders of the parent” as presented in the consolidated income statement.