Technology trends that will redefine all industries

Artificial Intelligence in every device

Autonomous machines

Augmented reality

Hyperscale cloud and connectivity

Security and Privacy
Arm defines the technology that will redefine all industries

<table>
<thead>
<tr>
<th>Artificial Intelligence in every device</th>
<th>Mobile and Consumer</th>
<th>Networking and Servers</th>
<th>Automotive and Robotics</th>
<th>Internet of Things</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Autonomous machines</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Augmented reality</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hyperscale cloud and connectivity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Security and Privacy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Arm introduction

Global leader in technology licensing

• R&D outsourcing for semiconductor companies

Innovative business model

• Upfront licence fee – flexible licensing models
• Ongoing royalties on partner sales
• Technology reused across multiple applications

Long-term, secular growth markets

>1,650 licences
Growing by >100 every year

>525 potential royalty payers

Multiple applications across a range of markets

23 bn Arm-based chips shipped in 2018

~15% CAGR over previous 5 years
Arm’s business model

Arm develops technology that is licensed to semiconductor companies.

Arm receives an upfront license fee and a royalty on every chip that contains its technology.

1) Arm licenses technology to chip Partners
2) Partners develop chips and ship them to OEMs
3) OEMs sell products containing Arm-based chips
Arm’s strategy

Maintain or gain share in long-term growth markets

• From mobile phones to networking infrastructure and servers to embedded smart devices and automotive

Increase value of Arm technology per smart device

• Invest in developing more advanced processors with higher royalty rates
• Physical IP and multimedia IP further increase Arm's value per chip

Explore and exploit new opportunities in emerging applications created by the Internet of Things

Invest to create a sustainable business, fit for the long term

• Create superior returns by developing new technology that will deliver increased profits and cash generation in the future
Arm’s main growth markets

**Mobile and Consumer Devices**
- Smartphones, tablets and laptops
- Apps processor, modem, connectivity, touchscreen and image sensors
- Growth coming from higher-value Arm technology such as Arm v8-A, octa core, multimedia

$108bn TAM 2028

**Networking & Servers**
- Base stations, routers, switches, and servers for cloud and data centres
- Networks evolve to cope with increased data at lower latency: virtualisation, integration and programmability
- Most major chip vendors have announced Arm-based products

$48bn TAM 2028

**Embedded Markets**
- Automotive, white-goods, wearables, smart devices in industrial and utilities
- Microcontrollers, smartcards, embedded connectivity chips
- 300 companies have licenced Arm processors for use in embedded computing devices

$94bn TAM 2028
History of Arm

Joint venture between Acorn Computers and Apple

1990

Designed into first mobile phones and then smartphones

1993 onwards

Now all electronic devices can use smart Arm technology

Today
Smart devices contain many Arm processors

**Applications Processor** chips can contain multiple Arm technologies

- Arm v8-A processor for OS and apps
- Cortex-R controller for modem
- Cortex-M controllers for peripherals
- Arm Mali multimedia processors: GPU, video, display, camera, etc.
- Arm physical IP

When new functions are added to smartphones it creates opportunity for new Arm IP
Arm-based chip shipments

146bn Arm-based chips shipped to date
33% Market share in 2018*

* Note that market share is lower than previous shown as market definition has been expanded

Previous years’ market shares 2010-2017: 20%, 22%, 27%, 28%, 31%, 32%, 35% and 34%.
Arm's opportunity continues to broaden

Semiconductor industry continues to grow: 8% by volume, 3% by value over past five years

Proportion of chips with processors is increasing over the medium term: 75% in 2018

Over the medium term, Arm is gaining share within the “chips with processors” segment of the industry: 33% in 2018
From revenue to profits

FY 2018 Revenues  
- Licensing $547 (30%)  
- Royalty $1,098 (60%)  
- Software and Services $191 (10%)  
- Total $1,836  

Costs ($m) $1,557  

Adjusted EBITDA ($m) $279  

Operating Margin 15%  

Other expenses ($m) ($1,442)  

IFRS EBIT ($m) $1,721  

License and royalty revenues similar to prior year reflecting weakness in industry  
Software and services growing >50% following two acquisitions in mid-2018  
Cost increase as Arm accelerates investment in R&D for future product developments  
10% move in $/£ impacts profits by ~15% (forex impacts £ revenues and costs)  
Operating margins will be lower than in recent periods as investments grow faster than revenues  
Includes sale of 51% stake in Arm China  
Excludes amortisation of intangibles related to the acquisition of Arm by SoftBank  

Financial numbers aligned with SoftBank reporting periods (01 April 2018 to 31 March 2019)
### Qtr. ending Mar. 2019 – Financial summary

<table>
<thead>
<tr>
<th>Revenues ($m)</th>
<th>Q4 2017</th>
<th>Q4 2018</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensing</td>
<td>156</td>
<td>213</td>
<td>37%</td>
</tr>
<tr>
<td>Royalty</td>
<td>269</td>
<td>247</td>
<td>-8%</td>
</tr>
<tr>
<td>Software and Services</td>
<td>36</td>
<td>53</td>
<td>47%</td>
</tr>
<tr>
<td>Total ($m)</td>
<td>461</td>
<td>513</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs ($m)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>COGS</td>
<td>32</td>
<td>28</td>
<td>-13%</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>163</td>
<td>186</td>
<td>14%</td>
</tr>
<tr>
<td>SG&amp;A ($m)</td>
<td>160</td>
<td>175</td>
<td>9%</td>
</tr>
<tr>
<td>Costs ($m)</td>
<td>355</td>
<td>389</td>
<td>10%</td>
</tr>
<tr>
<td>Adjusted EBITDA ($m)</td>
<td>106</td>
<td>124</td>
<td>17%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adjustments ($m)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation &amp; amortisation</td>
<td>25</td>
<td>32</td>
<td>28%</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>48</td>
<td>9</td>
<td>-82%</td>
</tr>
<tr>
<td>IFRS EBIT ($m)</td>
<td>33</td>
<td>83</td>
<td>152%</td>
</tr>
</tbody>
</table>

Licensing can fluctuate quarter to quarter. In Q4, Arm delivered a major new processor triggering a revenue recognition event.

Royalty revenue growth declined, consistent with weakness in wider industry.

Includes $16m from recent acquisitions of Treasure Data and Stream Technologies.

Arm is continue to increase investment in R&D capacity.
Q4 Licensing: 32 is within the normal range

The number of licenses for Cortex-M processors has been reduced since the introduction of the DesignStart Pro (DS Pro) program in June 2017. DS Pro Cortex-M processors are available for no upfront fee. In Q4, 30 DS pro licenses were signed for Cortex-M processors.
Licensing enables future royalties

Arm signed 125 licences Q1 to Q4 2018

Arm’s current royalty revenues are derived from licences signed many years ago

Growing base yields royalty revenues over long period

Significant Royalty Potential from Recent Licences

- >30% of Arm’s most recent licences are drivers of future royalty revenue
- >550 licences signed since Q1 2015
- >550 licences
Arm’s expanding opportunity

**2018**

<table>
<thead>
<tr>
<th>Market Share</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%</td>
<td>$34bn</td>
</tr>
<tr>
<td>40%</td>
<td>$18bn</td>
</tr>
<tr>
<td>30%</td>
<td>$15bn</td>
</tr>
<tr>
<td>4%</td>
<td>$20bn</td>
</tr>
<tr>
<td>75%</td>
<td>$7bn</td>
</tr>
<tr>
<td>10%</td>
<td>$5bn</td>
</tr>
</tbody>
</table>

**2028**

<table>
<thead>
<tr>
<th>Market Share</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$47bn</td>
</tr>
<tr>
<td></td>
<td>$23bn</td>
</tr>
<tr>
<td></td>
<td>$20bn</td>
</tr>
<tr>
<td></td>
<td>$28bn</td>
</tr>
<tr>
<td></td>
<td>$19bn</td>
</tr>
<tr>
<td></td>
<td>$12bn</td>
</tr>
</tbody>
</table>

- **Mobile**
  - Applications processor: 90% (2018) $34bn, 2028 $47bn
  - Other mobile chips: 40% (2018) $18bn, 2028 $23bn

- **Infrastructure**
  - Networking: 30% (2018) $15bn, 2028 $20bn
  - Data Center/Cloud: 4% (2018) $20bn, 2028 $28bn

- **Automotive**
  - IVI and ADAS: 75% (2018) $7bn, 2028 $19bn
  - Other automotive chips: 10% (2018) $5bn, 2028 $12bn
## Arm’s expanding opportunity

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Share</strong></td>
<td><strong>Market Value</strong></td>
<td><strong>Market Value</strong></td>
</tr>
<tr>
<td><strong>Embedded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controller in IoT Devices</td>
<td>90%</td>
<td>$7bn</td>
</tr>
<tr>
<td>Microcontrollers/ SIM Cards</td>
<td>25%</td>
<td>$18bn</td>
</tr>
<tr>
<td><strong>Other Markets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>40%</td>
<td>$12bn</td>
</tr>
<tr>
<td>Other chips</td>
<td>35%</td>
<td>$15bn</td>
</tr>
<tr>
<td><strong>Total Market</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All chips with processors (current TAM)</td>
<td>33%</td>
<td>$150bn</td>
</tr>
<tr>
<td>All addressable chips (future TAM)</td>
<td>25%</td>
<td>$165bn</td>
</tr>
</tbody>
</table>

- **Current TAM (2017):**
  - Controller in IoT Devices: 90% of $7bn
  - Microcontrollers/SIM Cards: 25% of $18bn

- **Future TAM (2026):**
  - Controller in IoT Devices: 90% of $20bn
  - Microcontrollers/SIM Cards: 25% of $22bn
  - Consumer Electronics: 40% of $37bn
  - Other chips: 35% of $21bn
  - All chips with processors (current TAM): 33% of $250bn
  - All addressable chips (future TAM): 25% of $270bn
Establishing Arm China JV in Fiscal Q1 2018

Building a bigger business; built on strong foundations

>150 Licensees

10bn Chips shipped by Chinese partners using Arm processor technology

95% Chinese designed SoC based on Arm processor technology

x140 Growth in volume shipment by Chinese partners 2006-2017

Arm China will be able to better access new local technology opportunities, especially in server, smart meter/grids and IoT
Establishing Arm China JV in 2018
Building a bigger business; built on strong foundations

>150
Customers to novate from Arm Limited to Arm China

~20%
Arm’s revenue came from China in 2017

>10-20
Licenses signed in a typical quarter with Chinese customers

>150
Employees transferred to Arm China in Q1

Arm China JV establishment was initiated in early Q1 2018 and completed at the end Q1.

Novation (transfer) process or historical contracts resulted in a delay to contract signing in the H1 2018.

As expected, licensing completely recovered in H2 2018, and finished ahead of target.

Significant proportion of future revenues will be passed back to Arm Limited.
Arm's current business

Arm develops *intellectual property* (IP) blocks which are used in silicon chips

Our partners combine Arm IP with their own IP to create complete chip designs

We earn *license fees* when we deliver Arm IP to our partners and *royalties* when our partners ship chips that contain Arm IP

Highly *profitable and cash generative*
Accelerating investment to increase share gains

Investing to create new revenue streams

- Arm Pelion IoT Platform SaaS business
- Early-stage investment but many years in research
- Securely connect and manage any device, using any communications technology, supporting any cloud platform
  - Device Management: secure device identification, on-boarding and configuring
  - Connectivity Management: manage IoT networks using standard-based comms
  - Data Management: Ingestion and aggregation of data

Generating profits and cash to be reinvested

Arm Pelion Partners
Arm IoT Services
Secure and scalable innovation from Device to Data

- > 30 PB of customer data managed
- > 2 million records per second ingested
- > 300K queries per day
- 55 TB network data flow per month
- Smart grid technology partnership with KEPCO, the largest electric power utility in South Korea
- China Unicom partnership for China based services

~1,000 customers

140+ Ecosystem partners

350k+ Developers
Pelion IoT Platform Overview

Pelion IoT Platform

Data Management Services
- Ingest
- Integrate
- Store
- Prepare

One View of Data
Unified operational view

Device Management Services
- Identity
- Access Mgt.
- Lifecycle Mgt.

One View of Devices
Unified Security Model

Connectivity Management
- SIM Mgt.
- Network Orchestration
- Service Quality

One View of Networks
Unified Identity

Deployment diversity
Simplification for faster time to value
Business value creation

Partner and Customer Applications
- Marketing
- Asset Visibility
- Energy Management
- Workflow SaaS
- Smart Lighting
- Machine Learning
- In-home Patient Care

Business Systems
- Marketing
- Business Intelligence
- Energy Management
- Workflow SaaS
- Smart Lighting
- Machine Learning
- In-home Patient Care

Marketing

Asset Visibility

Energy Management

Workflow SaaS

Smart Lighting

Machine Learning

In-home Patient Care

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversity
Simplification for faster time to value
Business value creation

Deployment diversi
How Arm makes money from IoT Devices
Semiconductor technology

Arm Integrated SIM technology
(Arm iSIM)
How Arm makes money from IoT Services
Connectivity, Device and Data Management

Data collected from IoT devices
Control of IoT devices
Other data sources
Recurring Device and Data Management Fees
Control of devices
Data from devices
OEM
Until 2016 revenues grew faster than costs as Arm constrained investment in R&D to enable increasing profits.

For the current phase of investment Arm expects costs to grow faster than revenues.

This should yield even greater profits in the future.

Note: Headcount in 2018 excludes 341 employees transferred to Arm China Joint Venture in June. By the end of Fiscal 2018, Arm China had 439 employees.
Investment philosophy

“Now is the time to be sowing, not harvesting”

- Rate of investment is discretionary and under Arm's control
- SoftBank has asked Arm to accelerate investments and to increase risk appetite
- All costs are expected to be financed from IP business’ revenue streams
- During this accelerated investment phase, costs are expected to grow faster than revenues

Arm has $1.4bn of net cash and no debt
Cash balance maintained as sale of Arm’s stake in the Arm China Joint Venture was balanced with the acquisition of Treasure Data Inc. and Stream Technologies Ltd.
Return on Investments – Arm v8-A case study

Arm incurs R&D costs many years before revenue starts

Research into 64-bit computing started in 2000

Arm v8-A Development starts

Architecture development and processor design

First generation of processors

Multiple processors in development

Return on Investments – General case

Arm incurs R&D costs many years before revenue starts

- Research into 64-bit computing started in 2000
- New technology development starts
- New technology announced
- First technology agreements
- Technology delivery
- Recurring revenue starts
- New technology development starts
- Initial development phase

Revenue continues for many years after the investment phase, yielding high profits over time
Investing in people, infrastructure to create new products

Costs are higher in 2018 as Arm expands R&D capability

Cost increases are expected to be consistent with increases in headcount

Q4 2017 Costs: $355m
- 2% increase in headcount: $7m
- Increased IT, facilities and other investments: $33m

Q4 2018 Costs: $389m
- Annual Bonus Accrual: $8m
- Impact of stronger dollar: ($15m)

Investment strategy
Arm Investor Relations Contact

<table>
<thead>
<tr>
<th>Contact</th>
<th>Title</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian Thornton</td>
<td>Head of Investor Relations</td>
<td>+44 1223 400796</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:ian.thornton@arm.com">ian.thornton@arm.com</a></td>
</tr>
</tbody>
</table>

More content available on

- Arm’s website: [arm.com/ir](arm.com/ir)