HOW ARE COUNTRIES APPROACHING THEIR AI STRATEGIES AND POLICIES?

Dirk Pilat
Karine Perset
OECD Directorate for Science, Technology and Innovation
From Principles to implementation - OECD.AI, OECD AI policy observatory (early 2020)

An inclusive online hub for AI information, evidence and policy options

1. AI Principles
   - OECD AI Principles
   - Practical implementation guidance

2. Policy areas
   - Jobs, skills, health, transport and more

3. Trends & data
   - OECD metrics & methods
   - Live data from partners

4. Countries and Initiatives
   - National strategies policies
   - Stakeholder initiatives

Multi-disciplinarity
Evidence-based
Global multi-stakeholder partnerships
35+
Countries have launched national AI strategies since 2017

Many countries have a strategy to leverage AI for competitiveness, productivity, national security, and to help address societal challenges.

45+
Countries are contributing to the OECD.AI

OECD.AI, launching in late 2019, aims to help countries encourage, nurture and monitor the responsible development of trustworthy AI systems.

220+
National AI policies, initiatives and instruments

Database detailing national AI policies and instruments.
Countries are strengthening AI research capabilities. Some are developing AI standards.

- Allocating national budget for AI R&D
  - Australia, Canada, France, Japan, US, etc.

- Creating AI research institutes (e.g. Centres of Excellence)
  - Canada, EU, France, UK, etc.

- Developing AI standards
  - Australia (Standards Australia)
  - Russia (Technical Committee on Standardization of AI)
  - US through NIST (ongoing plan)
Investments in AI start-ups

Total estimated investments in AI start-ups (USD billion)
(2011 to 2017 and first semester 2018)

By start-up location

First Semester 2018
USD 18B
USD 16B
USD 14B
USD 12B
USD 10B
USD 8B
USD 6B
USD 4B
USD 2B
USD B

2011: US
2012: US
2013: US
2014: US
2015: EU
2016: US
2017: US
Jan-Jun 2018: USD B

US  China  EU  Israel  Canada  Japan  Other  India
Policies to foster a digital ecosystem for AI (Recommendation 2)

Develop, or adapt, ecosystem for AI development and use, notably access to technologies & infrastructure.

<table>
<thead>
<tr>
<th>Support SMEs</th>
<th>Create AI Clusters / Hubs</th>
</tr>
</thead>
</table>
| • Finland – FAIA  
  • Germany – SME 4.0 Excellence Centres  
  • UK – Investment Fund, Digital catapult | • Canada – Toronto, Montreal  
  • Germany – Stuttgart Cyber Valley |

<table>
<thead>
<tr>
<th>Supporting data sharing mechanisms</th>
<th>Facilitate public procurement of AI systems and services</th>
</tr>
</thead>
</table>
| • Sweden – Data Factory  
  • Singapore – Virtual Singapore Platform  
  • UK – Data Trusts  
  • EU – Common Data Space | • Canada – List of vendors  
  • UK – Guidance on AI for the public sector |
Adapting policy and regulatory framework to support an agile transition from R&D to real use of AI.

- Providing experimentation environment (e.g. test bed and sandbox)
  - Testbed: Germany (AI living labs)
  - Sandboxes: Finland, France, UK (ICO’s …), etc.

- Reviewing and adapting their regulatory framework
  - Germany
  - US (regulatory reform for self-driving vehicles and drones)
To prepare for the AI transformation, countries are empowering people to use and interact with AI systems by education and training programmes.

- **Offering course or fellowship program on AI at university level**
  - **Finland**: Elements of AI – AI online course
  - **France, Germany, UK, etc.**: increase AI researchers

- **Providing training programs to workers**
  - **Ireland**: Skillnets
  - **US**: American AI Initiative
International co-operation for trustworthy AI (Recommendation 5)

To advance, or complement, the expertise in AI, countries are engaging in partnership or cooperative framework both at bilateral and multi-lateral levels.

- **Examples of bilateral cooperation include:**
  - France – Canada
  - France – Germany

- **Multi-lateral cooperation:**
  - European Union initiatives
  - Nordic-Baltic countries (e.g. Nordic AI Network)
Many countries prioritise AI in mobility and health

National AI strategies have placed a strategic focus on a handful of sectors, with healthcare and mobility emerging as a common priority to many of them.

Sector focus of selected national AI strategies

<table>
<thead>
<tr>
<th>Sector</th>
<th>France</th>
<th>Germany</th>
<th>UK</th>
<th>India</th>
<th>Japan</th>
<th>Singapore</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Healthcare</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>🟢</td>
<td>🟢</td>
<td></td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td>🟢</td>
<td></td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td>👍</td>
<td></td>
<td></td>
<td></td>
<td>🟢</td>
<td>👍</td>
</tr>
<tr>
<td>Defence/Security</td>
<td></td>
<td>🟢</td>
<td></td>
<td></td>
<td></td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>🟢</td>
<td>🟢</td>
</tr>
<tr>
<td>Other sectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>🟢</td>
<td>🟢</td>
</tr>
</tbody>
</table>

Source: OECD.AI, Countries & initiatives (forthcoming)
Responsibilities / co-ordination for national AI strategies

Many countries have established, or are considering, appropriate governance mechanisms to ensure a coordinated, whole-of-government approach. Such mechanisms include:

- **Government body to oversee implementation**
  - **France**: AI co-ordination function within the PM’s Office
  - **UK**: Office for Artificial Intelligence
  - **US**: AI IWG

- **Expert advisory Committees**
  - **Austria**: Austrian Council on Robotics and AI
  - **Canada**: Advisory Council on AI
  - **UK**: AI Council
  - **US**: Select Committee on AI under NSTC

- **Ethics bodies**
  - **Singapore**: Advisory Council on the Ethical Use of AI and Data
  - **UK**: The Centre for Data Ethics and Innovation
Evaluating the implementation of national AI strategies and policies

A few countries have started to evaluate their first year of implementation of their national AI strategy (Canada and UK).
OECD.AI will show more detail on National AI Strategies and Policies ...
... as well as live data and AI news
Contacts:

dirk.pilat@oecd.org
karine.perset@oecd.org
ai@oecd.org

OECD work on AI: http://www.oecd.ai