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LUXEMBOURG ARTIFICIAL INTELLIGENCE ECOSYSTEM

2024 KEY FACTS & FIGURES

EURO²

Luxinnovation
Market Intelligence

MAPPING LUXEMBOURG'S AI ECOSYSTEM

UNDERSTANDING THE GROWING AI ECOSYSTEM

An increasing number of organisations in Luxembourg are innovating, developing and using AI technologies. To better understand this booming field, Luxinnovation has produced a mapping of Luxembourg entities involved in the AI value chain, covering over 550 organisations.

The mapping highlights the different types of organisations contributing to the AI value chain: AI technology providers, AI solution developers, potential data providers, innovative AI users, AI communities, and private investors and incubators.

This document provides further in-depth insights about the AI ecosystem. It analyses the organisations included by category, age, specialisation and target market.

ECOSYSTEM MAPPINGS BY LUXINNOVATION

The ecosystem mappings done by Luxinnovation's Market Intelligence department are based on the establishment of consolidated databases including public and private entities (organisations, companies, etc.) in Luxembourg that have similar profiles.

They can, for example, belong to the same ecosystem or sector, target the same market, or use the same technology.

The AI ecosystem mapping was done in the context of the EUROCC2 project funded by the European Commission. It is based on data from September 2024.

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AI ECOSYSTEM OVERVIEW

568 entities, positioned all along the AI value chain, make up Luxembourg's AI ecosystem.

The scope of the Luxembourg AI mapping was defined according to the "Call for the selection of Hosting Entities for acquiring or upgrading EuroHPC systems with AI capabilities and establishment of associated AI Factories".

AI TECHNOLOGY PROVIDERS
Companies creating the foundational AI models, algorithms and systems.

11

PRIVATE INVESTORS AND INCUBATORS
Organisations and funds that can provide capital, resources, mentorship and support to AI startups, tech companies and various AI projects.

179

AI SOLUTION DEVELOPERS
Startups and established companies using existing AI technologies to develop, customise and deploy AI-driven applications, tools and services to businesses and industries.

133

568 ENTITIES

AI SUPPORT COMMUNITIES
Consultancy companies as well as academic and research organisations that enable the use of AI technologies and support their adoption by end users.

60

POTENTIAL DATA PROVIDERS
Holders of raw or processed data that could be used to train or improve AI algorithms.

103

INNOVATIVE AI USERS
Public and private organisations using, or planning to use, supercomputing capacities for AI projects, or that have received or applied for national and/or European funding for conducting AI-related R&D or innovation projects.
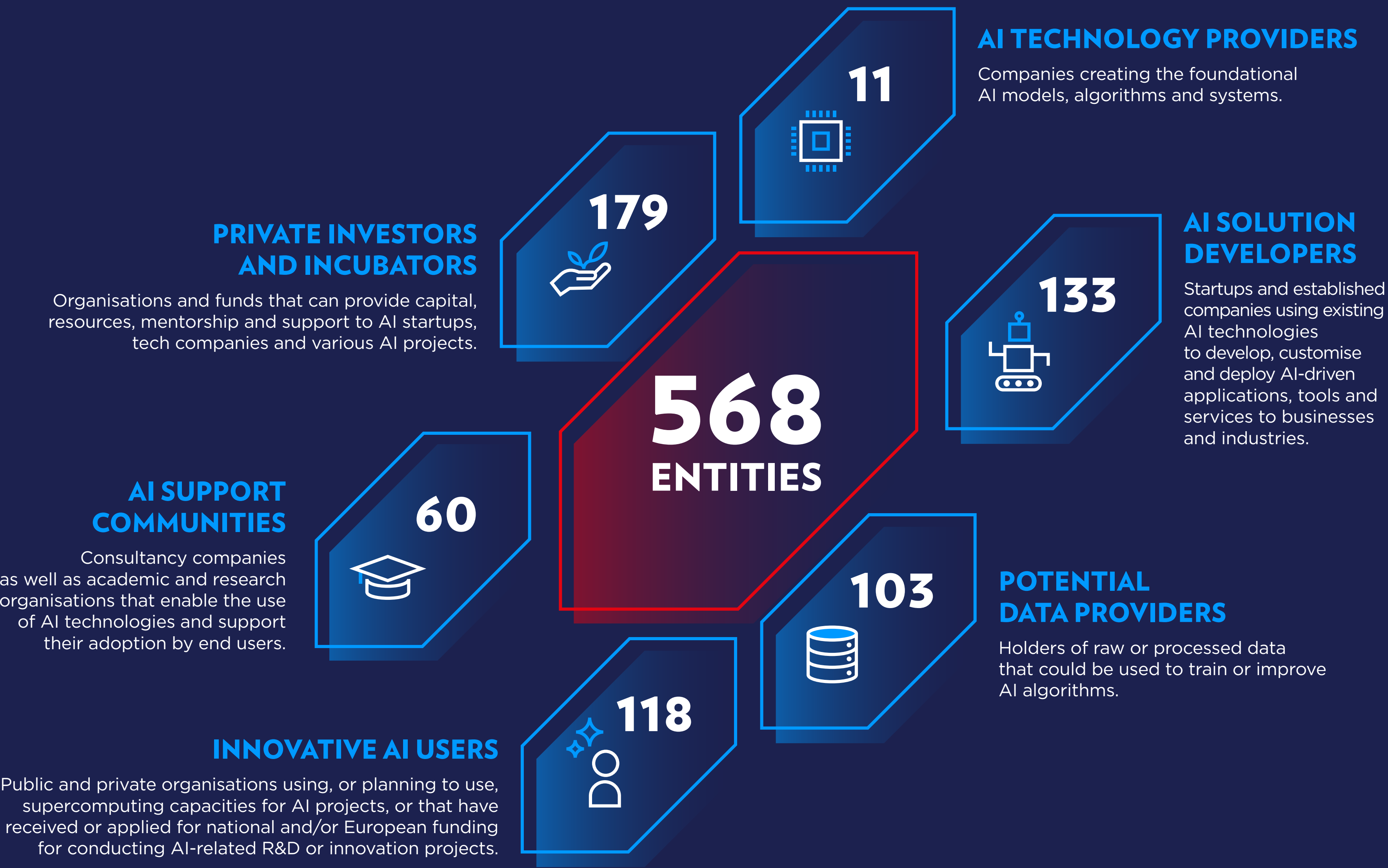
118

Figure 1:
Numbers and categories of stakeholders shaping the Luxembourg AI ecosystem

Source of data: Luxinnovation (2024 Luxembourg Artificial Intelligence Ecosystem Mapping)
N.B.: Some entities are included in more than one category where relevant.

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AI SOLUTION DEVELOPERS
AGE OF COMPANIES

The great majority of the 133 Luxembourg startups and established companies developing AI solutions were created less than 10 years ago.

Over the last ten years, the number of Luxembourg entities specialising in developing artificial intelligence solutions and services has increased considerably. The main acceleration has taken place during the last 5 years.

44% of the Luxembourg entities deploying AI-based services and solutions are startups incorporated in Luxembourg less than 5 years ago. Another 36% can be considered as scaleups, as they were incorporated 6 to 10 years ago.

Almost one-fifth (18%) of the companies are well-established companies, incorporated in Luxembourg between 2005 and 2015.

Only 2% of the companies deploying AI-based services or solutions have been in business for more than 20 years.
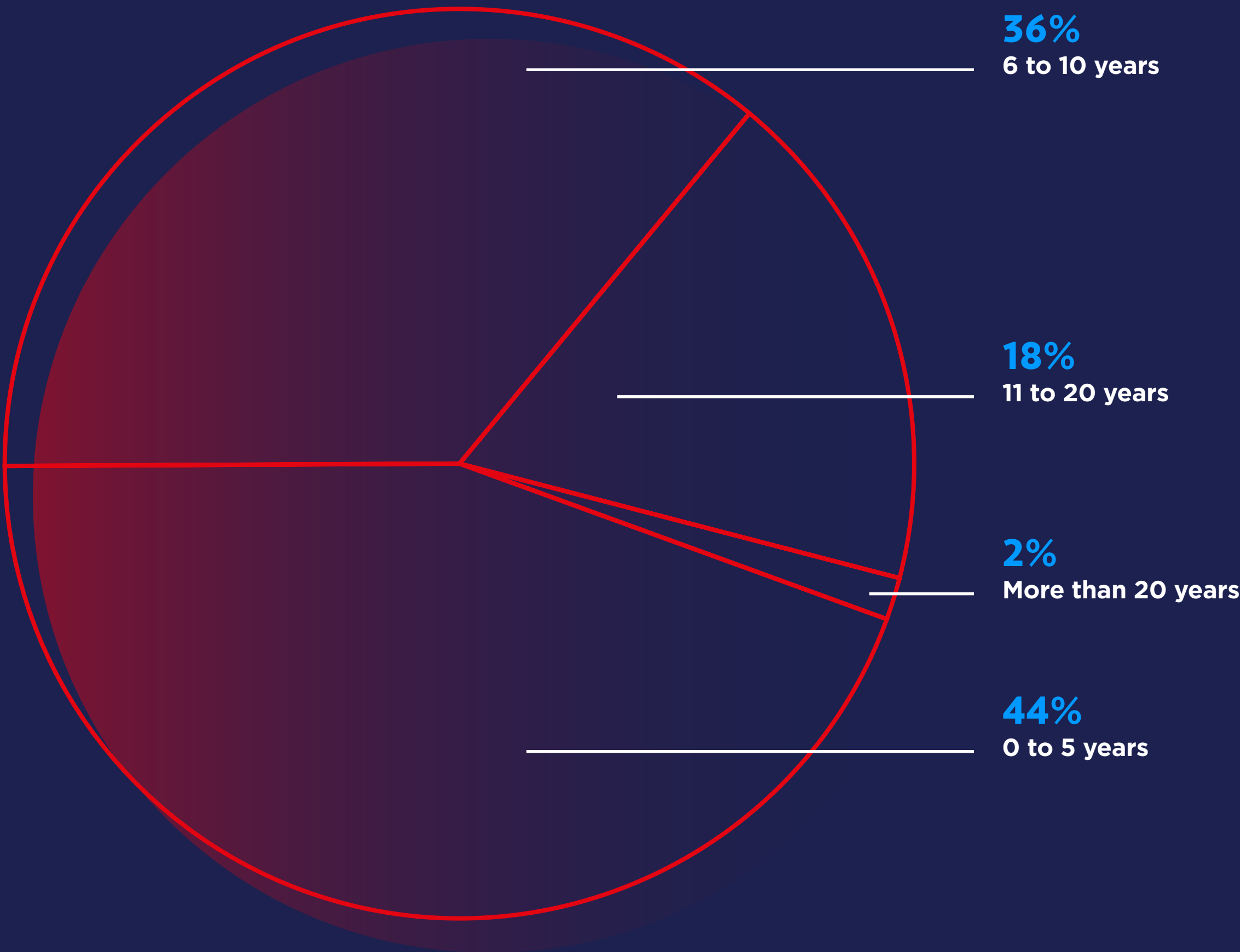
36%
6 to 10 years

18%
11 to 20 years

2%
More than 20 years

44%
0 to 5 years

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AI SOLUTION DEVELOPERS SPECIALISATION

Over half of Luxembourg's 133 AI solution developers focus on the same three target markets.

The top three markets targeted by more than half (57%) of Luxembourg companies developing AI-based solutions or services are:

- IT & Cyber (28%)
- Finance & Insurance (21%)
- Creative industries & Leisure (20%)

44% of the companies target Health & Wellbeing, Industry & Manufacturing and Space.

The mobility and telecoms, administration, energy and construction sectors are less frequently targeted. This means that there are still opportunities on the national level to develop specific solutions targeting these sectors.
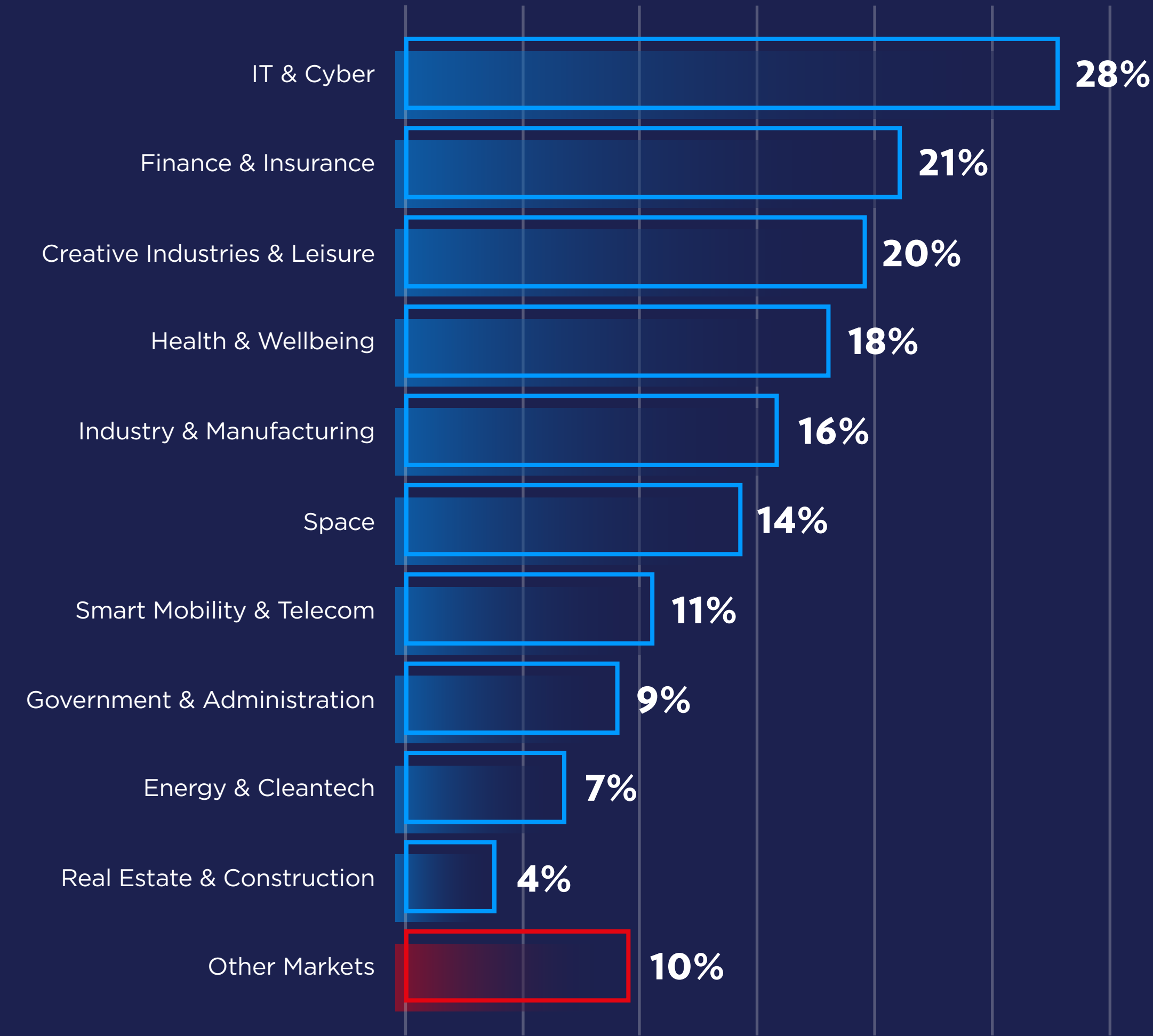
Market	Percentage
IT & Cyber	28%
Finance & Insurance	21%
Creative Industries & Leisure	20%
Health & Wellbeing	18%
Industry & Manufacturing	16%
Space	14%
Smart Mobility & Telecom	11%
Government & Administration	9%
Energy & Cleantech	7%
Real Estate & Construction	4%
Other Markets	10%

Figure 3:
Markets most frequently targeted by Luxembourg AI solution developers (percentage of entities)

Source of data: Luxinnovation (2024 Luxembourg Artificial Intelligence Ecosystem Mapping)
N.B.: Some entities may target more than one market

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INNOVATIVE AI USERS
SPECIALISATION

Over half of Luxembourg's 118 innovative AI users are targeting the same three sectors.

A total of 118 public or private entities in the ecosystem are already using, or planning to use, supercomputing capacities for AI projects, or have received or applied for national and/or European funding to conduct AI-related R&D or innovation projects. Their aim is to use AI technologies to perform tasks, improve processes and make informed decision in various business functions.

The top three sectors targeted by more than half (53%) of Luxembourg's innovative AI users are:

- Industry & Manufacturing (25%)
- Smart Mobility & Telecom (21%)
- IT & Cyber (20%)

48% of the innovative AI users target the Energy & Cleantech, Health & Wellbeing and Finance & sectors.
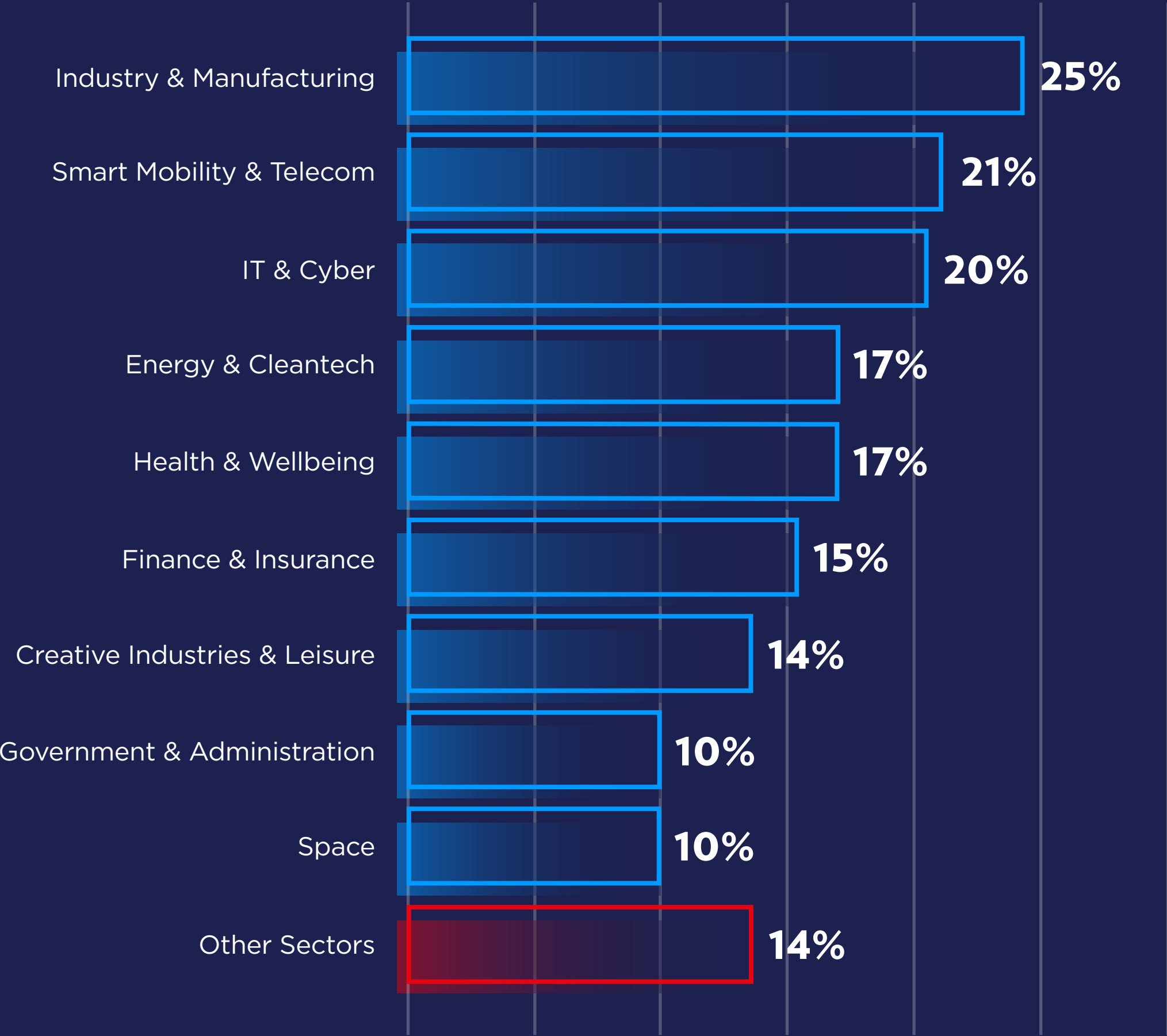
Sector	Percentage
Industry & Manufacturing	25%
Smart Mobility & Telecom	21%
IT & Cyber	20%
Energy & Cleantech	17%
Health & Wellbeing	17%
Finance & Insurance	15%
Creative Industries & Leisure	14%
Government & Administration	10%
Space	10%
Other Sectors	14%

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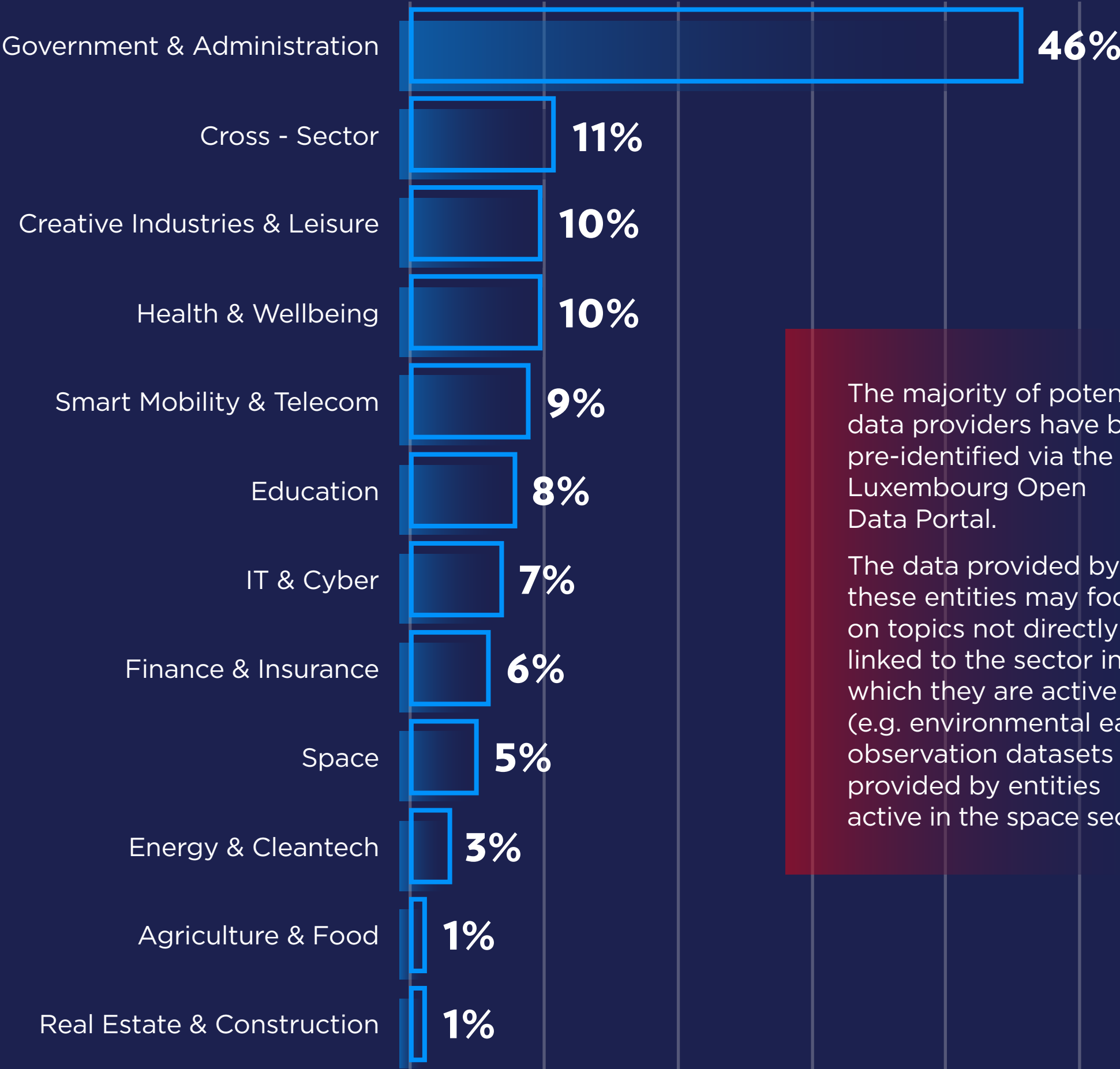# POTENTIAL LUXEMBOURG DATA PROVIDERS
SPECIALISATION

Almost half of Luxembourg's potential data providers are active in the Government & Administration sector.

103 private and public organisations in Luxembourg hold raw or processed data that can or could, at a later stage, be used to feed AI models and algorithms.

46% are active in the Government & Administration sector.

In addition to those classified as cross-sectoral, many data owners are in the Creative Industries & Leisure, Health & Wellbeing and Smart Mobility & Telecom sectors. Together, they make up 38% of the potential data providers in the country.

Sector	Percentage
Government & Administration	46%
Cross - Sector	11%
Creative Industries & Leisure	10%
Health & Wellbeing	10%
Smart Mobility & Telecom	9%
Education	8%
IT & Cyber	7%
Finance & Insurance	6%
Space	5%
Energy & Cleantech	3%
Agriculture & Food	1%
Real Estate & Construction	1%

The majority of potential data providers have been pre-identified via the Luxembourg Open Data Portal.

The data provided by these entities may focus on topics not directly linked to the sector in which they are active (e.g. environmental earth observation datasets provided by entities active in the space sector).

Figure 5:
Sectors most represented by Luxembourg potential data providers (percentage of entities)

Source of data: Luxinnovation (2024 Luxembourg Artificial Intelligence Ecosystem Mapping) and Luxembourg Open Data Portal
N.B.: Some entities may target more than one market

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POTENTIAL EUROPEAN DATASETS FOR AI
FOCUS

In addition to the potential Luxembourg data providers identified via our mapping, we have identified 68 common European datasets that could be used by AI developers.

Current available European datasets appear to complement the datasets provided by Luxembourg data providers. For instance:

Few national data providers are active in the Energy & Cleantech, Agriculture & Food or Education sectors. However, these topics are among the top 5 sectors addressed by EU datasets, offering additional data sources to Luxembourg organisations using AI.
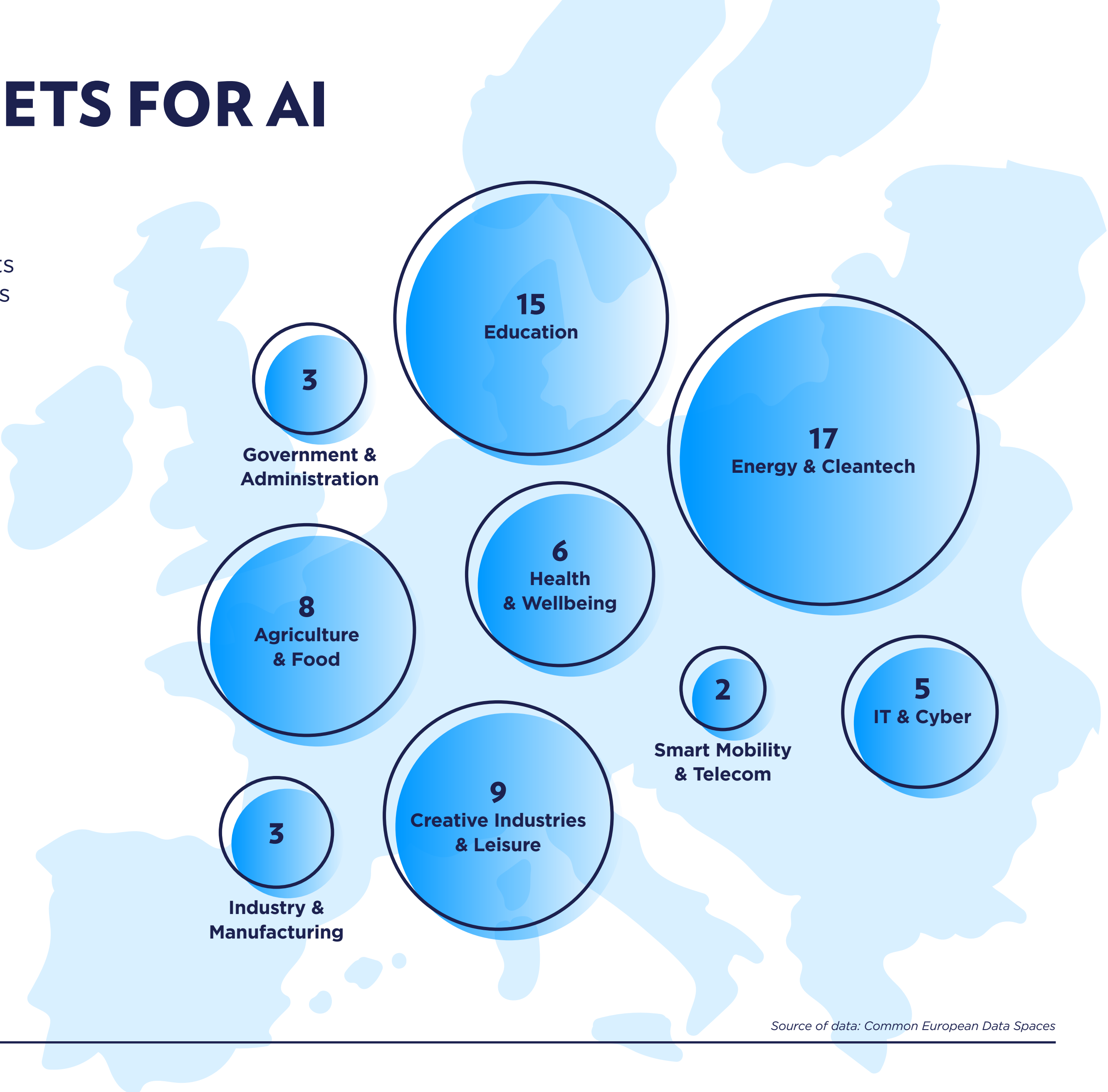
15 Education

3 Government & Administration

17 Energy & Cleantech

8 Agriculture & Food

6 Health & Wellbeing

2 Smart Mobility & Telecom

5 IT & Cyber

3 Industry & Manufacturing

9 Creative Industries & Leisure

Figure 6:
Number of EU datasets by sector

Source of data: Common European Data Spaces

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AI SUPPORT COMMUNITIES ORGANISATION TYPES

Most of the 60 private and public entities in Luxembourg enabling the use and adoption of AI are consultancy companies.

AI communities include all public and private entities enabling the development of artificial intelligence core technologies and AI solutions. They also support the adoption of AI technologies.

Three main categories of enablers can be identified among the national AI communities:

Private consulting companies, which represent 83% of the current enablers in the national ecosystem.

Non-profit organisations, which represent 10% of the AI communities.

Academia & research organisations, which make up 7% of the AI communities. Although few in number, they play a fundamental role in developing and implementing research projects that are key to the future of AI technologies.
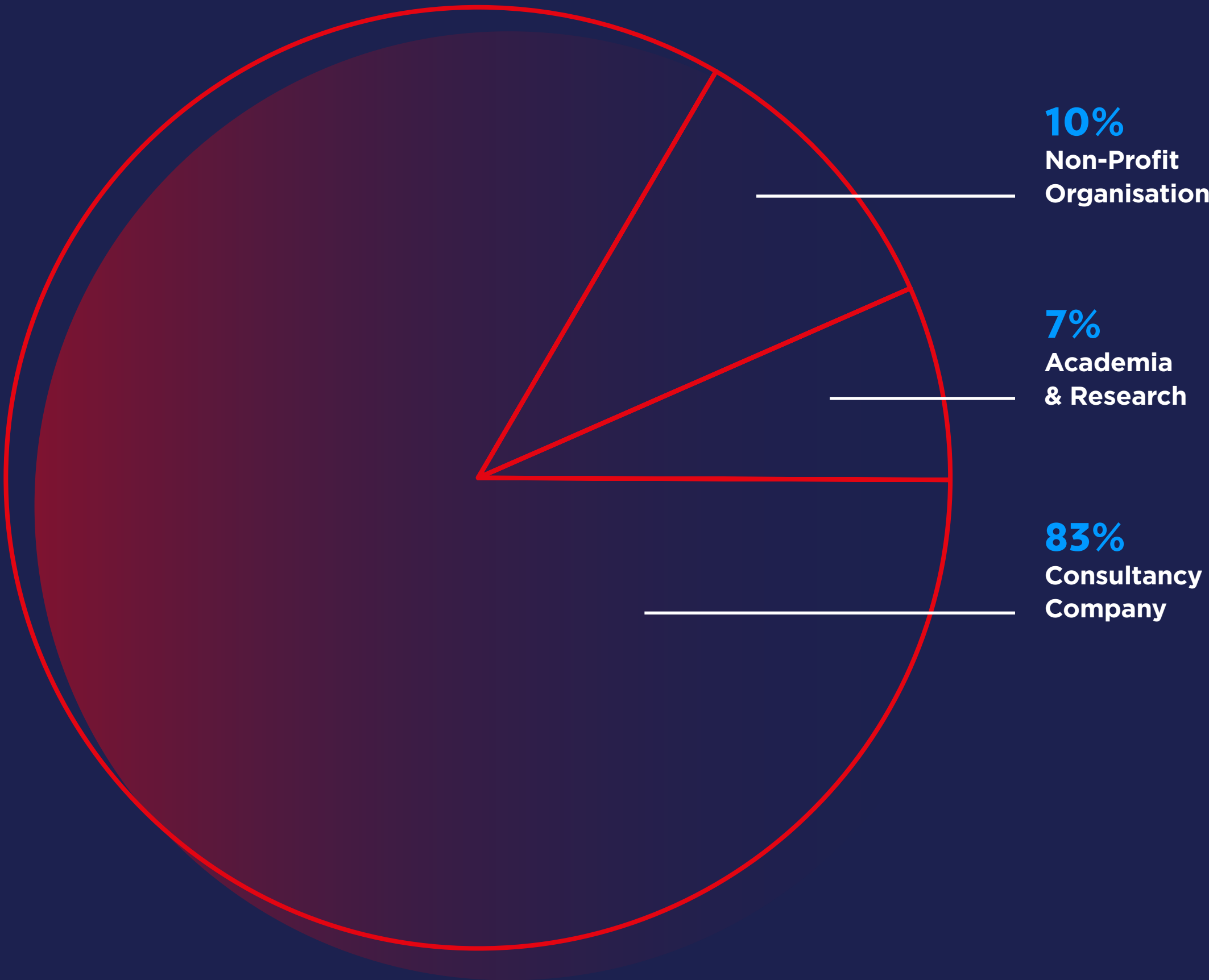
10%
Non-Profit Organisation

7%
Academia & Research

83%
Consultancy Company

Figure 7:
Categories of Luxembourg AI communities (percentage of entities)

Source of data: Luxinnovation (2024 Luxembourg Artificial Intelligence Ecosystem Mapping)

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PRIVATE INVESTORS AND INCUBATORS
ORGANISATION TYPES

The majority of the 179 Luxembourg investors and incubators in the AI ecosystem are VC investors.

The 179 Luxembourg entities identified in this category complete the AI ecosystem by offering capital, resources and support. The selected organisations have listed artificial intelligence as one of their "preferred verticals" for investments in sources such as Pitchbook and Dealroom. This means that they may invest in startups and technology companies located in Luxembourg and all over the world.

Venture capital (VC) investors is the largest category (60%) of entities.

Corporates are also investing massively in AI startups and technology companies. They account for 20% of investors in the Luxembourg ecosystem.

The other categories of investors, including incubators and accelerators, together account for 20% of the players.
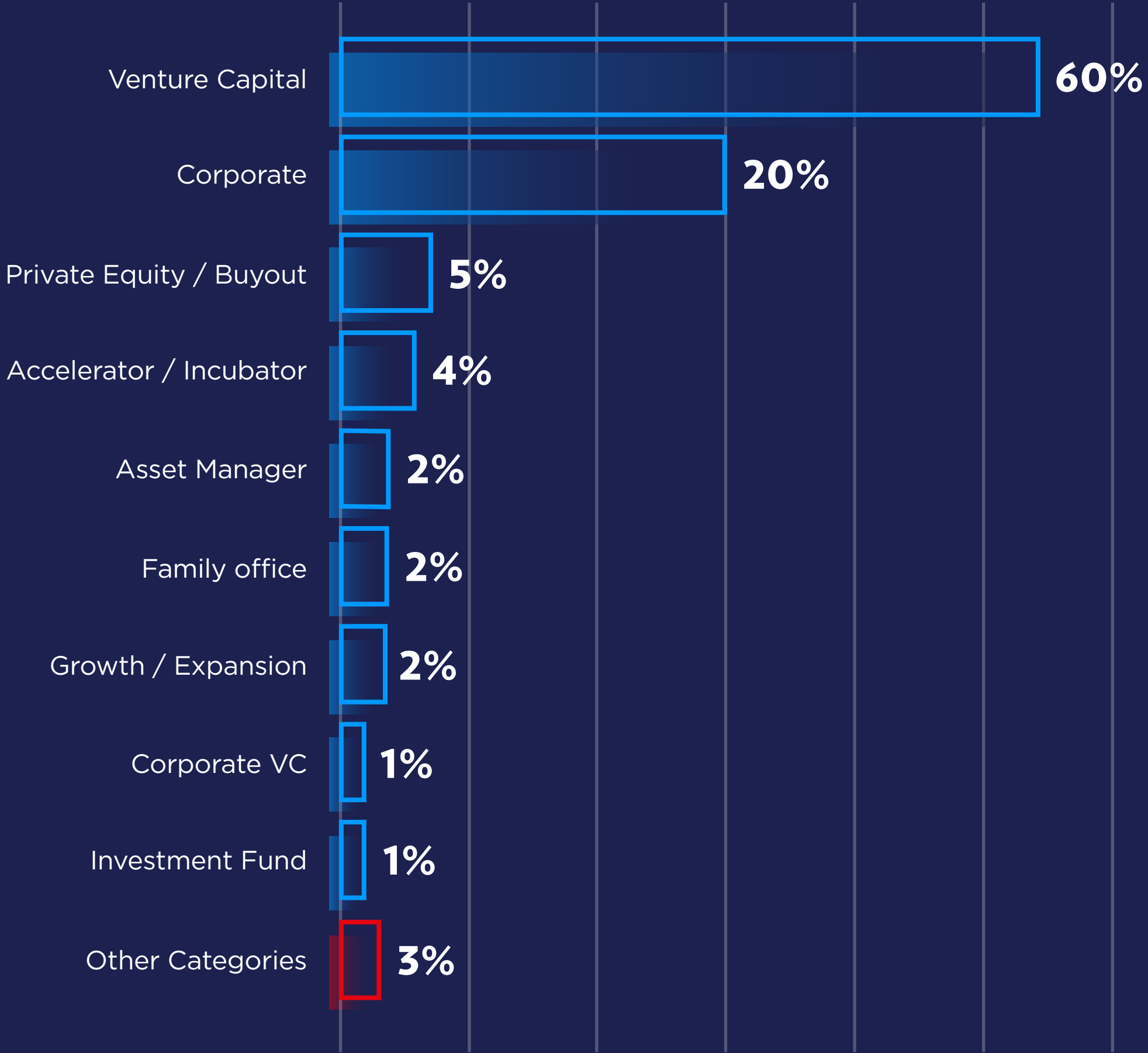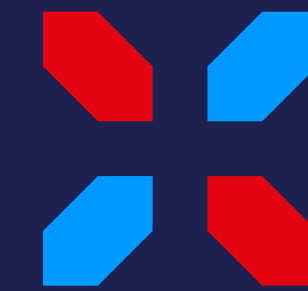
Figure 8:
Categories of investors
in the Luxembourg AI ecosystem
(percentage of investors)

Category	Percentage
Venture Capital	60%
Corporate	20%
Private Equity / Buyout	5%
Accelerator / Incubator	4%
Asset Manager	2%
Family office	2%
Growth / Expansion	2%
Corporate VC	1%
Investment Fund	1%
Other Categories	3%

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LOOKING FOR AI PARTNERS?

We can help you identify key players and connect with them.

CONTACT US

For more information on the Artificial Intelligence Ecosystem

CLICK HERE