The role of artificial intelligence in advancing sustainability and the European Green Deal

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- Artificial intelligence (AI) has emerged as a crucial topic at the intersection of digital and green transitions, with the potential to address climate change and drive decarbonization for overall sustainability significantly.

- The role of AI in environmental sustainability is multifaceted, encompassing both extraordinary opportunities and inherent challenges.

AI’s Potential for Environmental Sustainability

- AI can make massive contributions to fighting climate change and achieving decarbonization.
- It serves as a pivotal tool for environmental sustainability by enhancing efficiency, minimizing waste, and fostering innovation.
- AI is leveraged to assist in achieving the Sustainable Development Goals, especially environmental aspects.
- Estimates suggest AI could reduce global greenhouse gas emissions by 1.5-4% by 2030.

Key application areas for AI in environmental sustainability:

- Energy systems.
- Transportation.
- Buildings and Cities.
- Agriculture and Forestry.
- Waste and Water Management.
- Environmental Monitoring and Disaster Management.
- Biodiversity Protection.

The Environmental Footprint of AI: Key Challenges

- Generative AI and other models consume vast energy and water, driving high emissions, especially from non-renewable sources.
- AI hardware production and disposal worsen resource extraction and e-waste problems.
- Data centers significantly contribute to global greenhouse gas emissions.
- Indirect risks include enabling fossil fuel exploration, undermining climate goals.
- Other issues: data privacy, algorithmic bias, high costs, technical limitations, and dependence on data quality.

Innovations and startups:

- There are more than 150 million startups globally
- 50 million new startups each year
- 10% of startups are successful,
  so only 5 million of them are viable
- 34% of startup failures are due to a lack of demand for their products

https://www.demandsage.com/startup-statistics January 2024
https://creately.com/blog/culture/challenges-faced-by-startups July 2023

Green Tech and Sustainable Innovations:

- 78% of consumers feel that sustainability is important;
- 62% of people often seek products to purchase because they are sustainable;
- 55% of consumers are willing to pay more for eco-friendly brands;
- 84% of customers say that poor environmental practices will push them away from a brand.

https://theroundup.org/environmentally-conscious-consumer-statistics April 2024

- According to Eric Ries, the author of ‘The Lean Startup’, **Minimum Viable Product** (**MVP**) is the simplest version of a product that allows a team to collect the maximum amount of validated information about customers with the least effort.

- Denise Lee Yohn states that startups need **Minimum Viable Brand** (**MVB**) – the most basic, essential version of a brand that can clearly and effectively communicate the brand’s value proposition and differentiate it in the market.

https://hbr.org/2014/06/start-ups-need-a-minimum-viable-brand

HOW DOES OUR SOLUTION WORK?

Enter startup idea description using the following instructions:

- Job to be Done (task or goal that a customer is trying to accomplish)
- Your solution
- Your technology essence

Our GPT-based AI Persona Experts use Analytical Hierarchy Process method and initialize the decision-making process

Unique hierarchy structure

AI Persona Experts assess the startup's eco-friendliness

Criteria 1 + sub-criteria

Criteria 2 + sub-criteria

Criteria 3 + sub-criteria

Startup is eco-friendly: Proceed

Startup is not eco-friendly: Pivot

The overall eco-score in percent and recommendations from AI experts

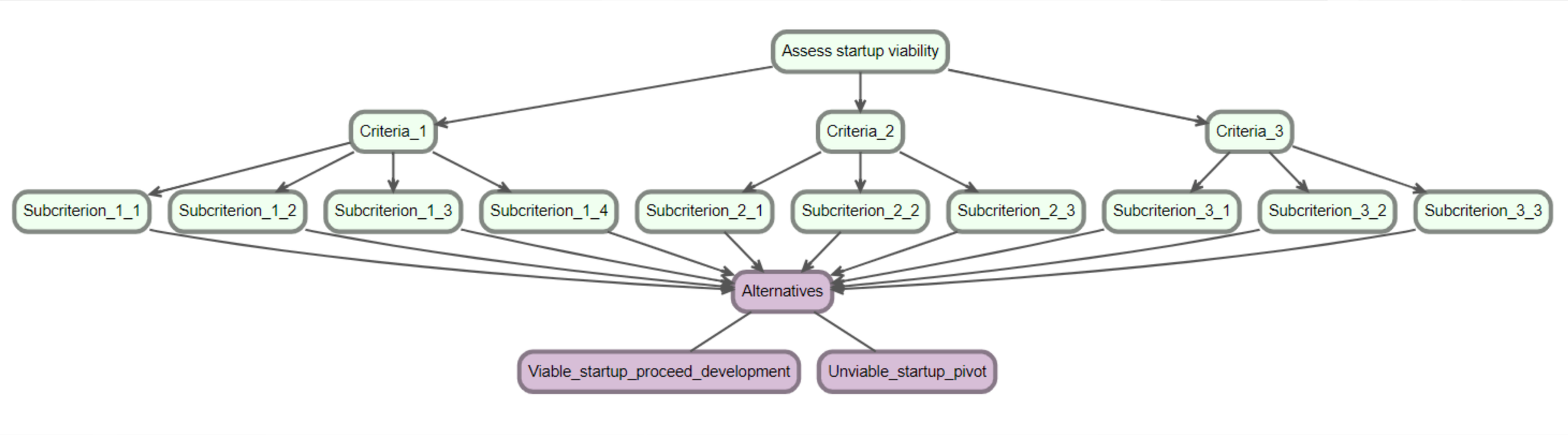
THE RESULTS OF ASSESSING THE ECO-FRIENDLINESS OF A STARTUP

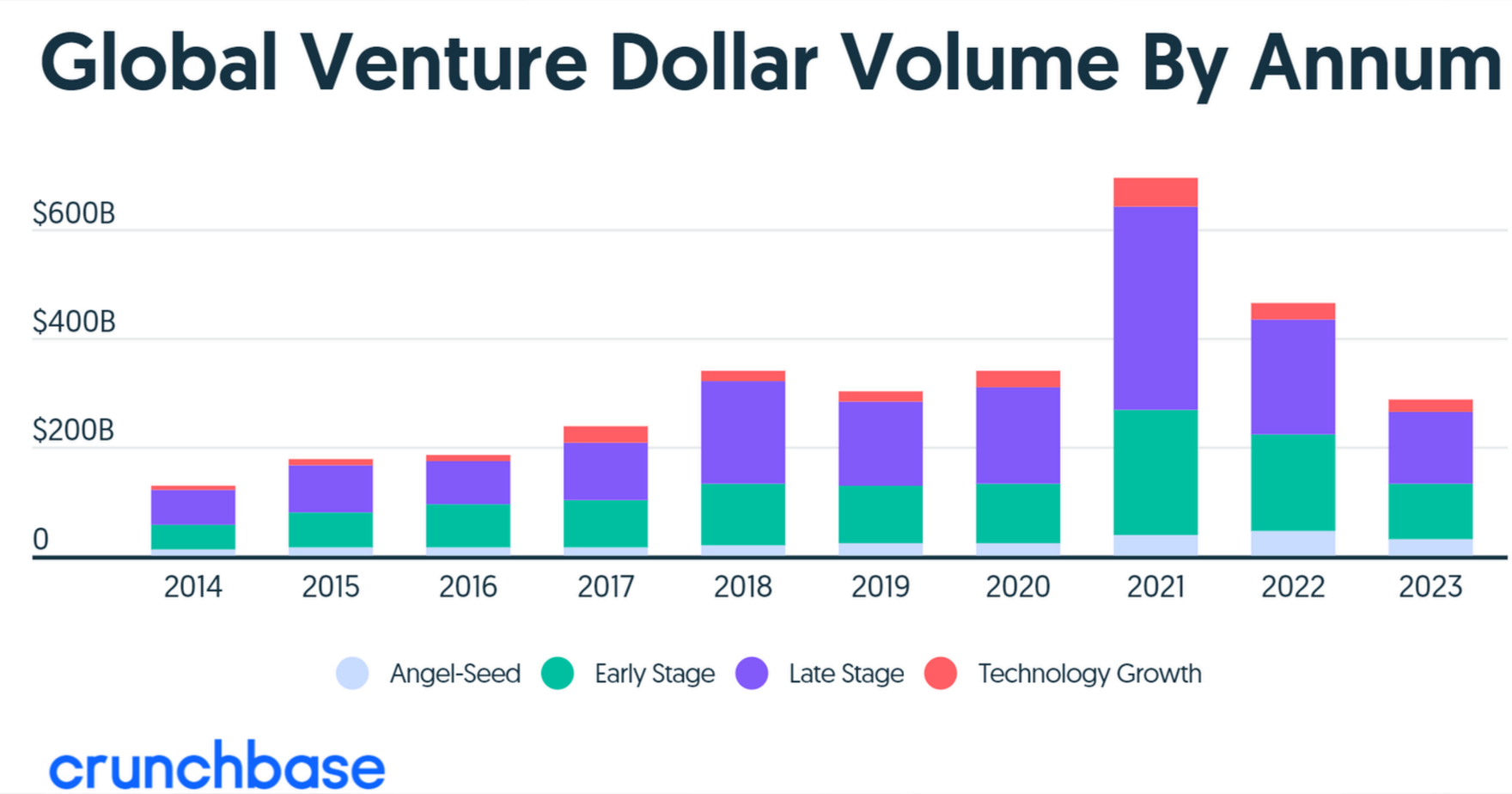
There is an 80% chance that the analyzed startup will be successful. Great!

Inconsistency is less than 10%, so the results are reliable for decision-making

	Weight	Viable_startup_proceed_development	Unviable_startup_pivot	Inconsistency
Assess startup viability	100.0%	80.2%	19.8%	7.0%
Criteria_3	59.6%	47.2%	12.3%	5.1%
Subcriterion_3_1	29.2%	22.3%	6.8%	0.0%
Subcriterion_3_3	24.5%	20.5%	4.0%	0.0%
Subcriterion_3_2	6.0%	4.4%	1.6%	0.0%
Criteria_1	28.5%	24.9%	3.7%	9.4%
Subcriterion_1_1	20.0%	17.4%	2.6%	0.0%
Subcriterion_1_3	4.3%	3.8%	0.4%	0.0%

HIERARCHY VISUALIZATION EXAMPLE





While 2023 shows a decline, the market remains robust and exceeds pre-2018 levels.

Global startup investment in 2023 reached $285 billion.

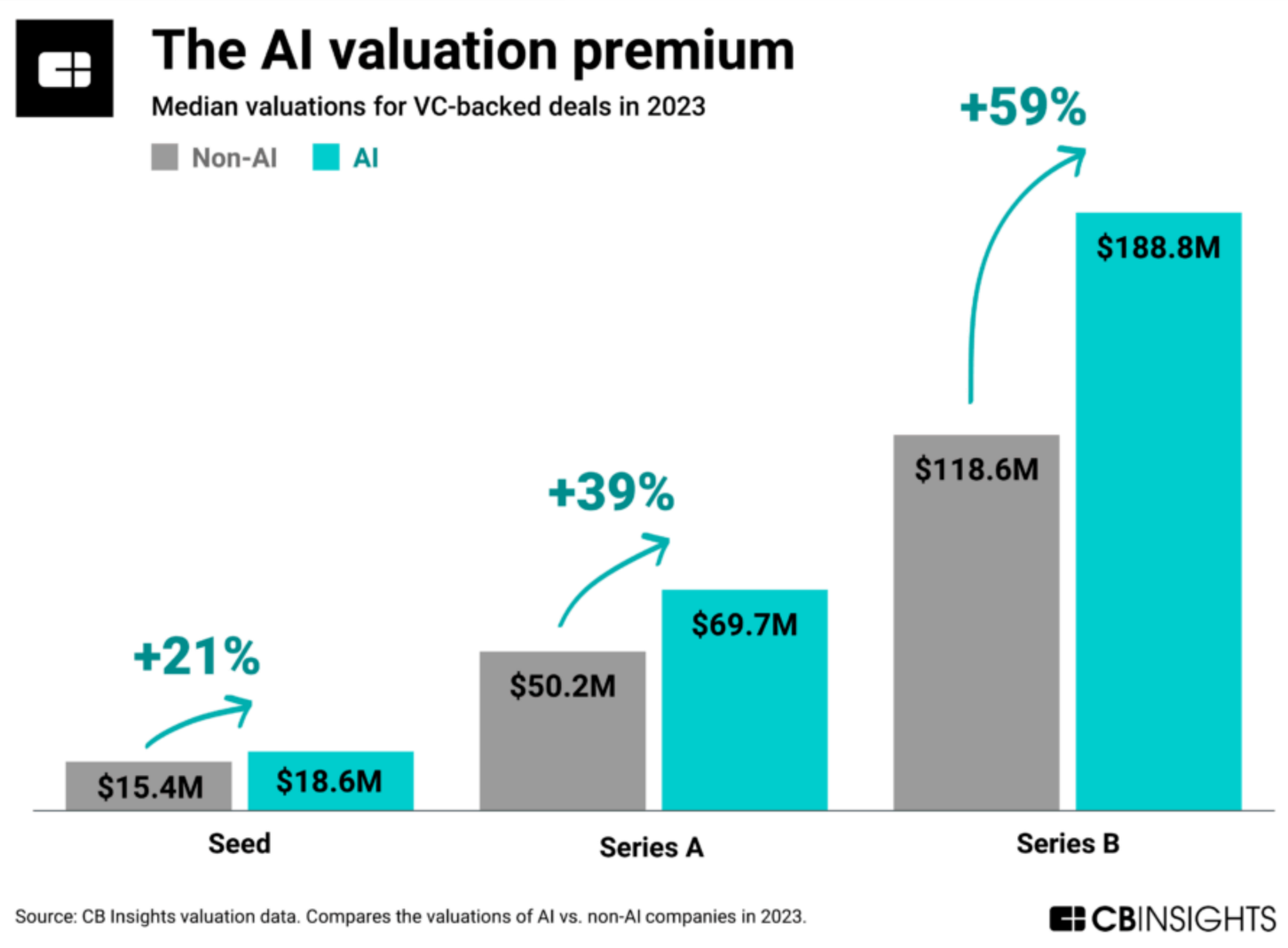
https://news.crunchbase.com/venture/global-funding-data-analysis-ai-eoy-2023/#AI%20leads January 2024

Crunchbase notes that while most industries saw a decline in 2023, AI is the largest sector to see an increase.

Global funding for AI startups reached nearly $50 billion in 2023, a 9% increase from the $45.8 billion invested in 2022.

https://news.crunchbase.com/venture/global-funding-data-analysis-ai-eoy-2023/#AI%20leads January 2024
https://news.crunchbase.com/startups/ai-ma-web3-metaverse-vr-2023-charts February 2024

THE MARKET: AI STARTUPS



Valuations for early-stage AI startups in 2023 were substantially higher than non-AI ones

https://www.cbinsights.com/research/ai-startup-valuations January 2024

Gartner states that:

- **More than $10 billion will be invested in AI startups by 2026;**
- **Global spending on AI software will increase from $124 billion in 2022 to $297 billion in 2027.**

https://www.gartner.com/en/articles/gartner-strategic-data-and-analytics-predictions-through-2028 May 2023
https://www.linkedin.com/pulse/gartner-predicts-ai-software-grow-297-billion-2027-louis-columbus-okpfc January 2024

Thank you for your attention!

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