

MULTIDIMENSIONAL ANALYSIS TOOL

Section 1: Technology Overview and General Information

1. Technology/Innovation Name

- *Question Type:* Short Answer
- *Guidance:* " Be specific about the name of the technology or innovation you're referring to. Avoid abbreviations or acronyms unless they are widely known in the industry. If you're unsure of the exact name, provide the name of the technology/innovation with a short description."

2. Technology/Innovation Description

- *Question Type:* Paragraph (with character/word limit as needed)
- *Guidance:* "Be specific about the name of the technology or innovation you're referring to. Avoid abbreviations or acronyms unless they are widely known in the industry. If you're unsure of the exact name, provide the name of the technology/innovation with a short description."

3. Technology Owner/Developer Organisation/Person Name(s)

- *Question Type:* Short Answer
- *Guidance:* "Specify the name of the individual or organisation that developed or owns the technology. If it's a well-known company, use the full name. For individuals, include their name(s) and any relevant title or role. If multiple people or organisations are involved, list them."

4. Contact Information

- *Question Type:* Multiple Short Answer fields (Contact Person, Role, Phone Number, Email Address)

5. Thematic Area

- *Question Type:* Multiple Choice (multiple can select)
- *Options:*
 - Low Carbon Economy
 - Blue Economy
 - Resilience and Adaptation to Climate Change
 - Circular Economy
 - Green Transport and Logistics
 - Carbon Management and Storage Technologies
 - Other (please specify)

6. Relevance and/or Alignment with the Selected Thematic Area(s)

- *Question Type:* Paragraph
- *Guidance:* "Describe how the technology or innovation aligns with the goals or needs of the selected thematic area(s). Highlight key connections between the technology's purpose or function and the thematic area, considering how it contributes to or addresses specific challenges or opportunities. If the technology spans multiple thematic areas, briefly mention its relevance to each."

7. Industry to which the proposed technologies are applied (Multiple answers allowed)

- *Question Type:* Multiple Choice (multiple can select)
- *Options:*
 - Energy
 - Agriculture
 - Water Resources
 - Transportation
 - Healthcare and Biotechnology
 - Information and Communication Technology (ICT)
 - Construction and Infrastructure
 - Education and Training
 - Automotive and Mobility
 - Environment and Sustainability
 - Aerospace and Defense
 - Mining and Materials
 - Financial Technologies (FinTech)
 - Artificial Intelligence and Robotic
 - E-commers
 - Pharmaceuticals and Medical Devices
 - Logistics and Supply Chain Management
 - Other (please specify)

8. Development Stage

- *Question Type:* Multiple Choice
- *Options:*
 - R&D Project Idea (A concept or idea in its initial stages, planned for further development.)
 - Immature Research Result (Initial research findings that require further development or validation.)

- Mature Research Result (Fully developed research outcomes with significant validation or proof.)
- Development Phase (The stage where research results are transformed into technical solutions, products, or processes.)
- Proof of Concept (Demonstrating the feasibility and basic principles of a technology or idea.)
- Prototype (The first physical or digital model of the technology or product, created for testing purposes.)
- Pilot (Small-scale application or testing phase in real-world conditions.)
- Validation in Real Operational Environment (The stage where the technology's performance is verified under actual operational conditions.)
- Market Introduction (The stage where the technology or product is launched into the commercial market for the first time.)
- Mass Production (Transition to large-scale production of the technology or product.)
- Scaling-Up Phase (Expanding the technology's application and market reach to a larger scale.)
- Other (Please Specify)

Section 2: Technology Maturity and Intellectual Property Status

1. Technology Readiness Level (TRL)

- *Question Type:* Multiple Choice
- *Options:*
 - TRL-1: Basic principles observed (Scientific observation made and reported. Examples could include paper-based studies of a technology's basic properties.)
 - TRL-2: Technology concept formulated (Envisioned applications are speculative at this stage. Examples are often limited to analytical studies)
 - TRL-3: Experimental proof of concept (Effective research and development initiated. Examples include analytical predictions)
 - TRL-4: Technology validated in lab (Technology Validated through designed investigation. Examples might include analysis of the

technology parameter operating range. The result provides evidence that envisioned application performance requirements)

- TRL-5: Technology validated in relevant environments (Reliability of technology significantly increases. Examples could involve validation of a semi-integrated system/model of technological and supporting elements in a simulated environment.)
- TRL-6: Technology demonstrated in a relevant environment (Prototype system verified. Examples might include a prototype system/model being produced and demonstrated in a simulated environment.)
- TRL-7: System model or prototype demonstration in operational environment (A major step increase in technological maturity. Examples could include a prototype model/system being verified in an operational environment.)
- TRL-8: System complete and qualified (System/model produced and qualified. An example might include the knowledge generated from TRL-7 being used to manufacture an actual system/model, which is subsequently qualified in an operational environment. In most cases, this TRL represents the end of development.)
- TRL-9: Actual system proven in operational environment (System/model proven and ready for full commercial deployment. An example includes the actual system/model being successfully deployed for multiple missions by end users.)

2. Were any funding sources used during the development of the technology?

○ *Question Type:* Multiple Choice

○ *Options:*

- Yes
- No

- If "Yes," a follow-up question appears:

2.1. What is the source of funding used?

○ *Question Type:* Multiple Choice

○ *Options:*

- National Funding Sources (Government funding/programme etc.)
- International Funding Sources (Horizon Europe, Cross-Border Cooperation etc.)
- Private Investments (Venture capital, angel investors, crowdfunding Platforms, corporate funding etc.)

- University or Academic Institution Grants (Internal research funds or academic project grants)
- Self-Funding (Personal or organizational financial resources etc.)
- Non-Profit Organization Support (NGOs, foundations, or charities etc.)
- Other (Please Specify)

2.2. What is the total cost incurred so far for the realization of the technology?

- *Question Type:* Multiple Choice
- *Options:*
 - \$0- \$10,000
 - \$10,000 - \$50,000
 - \$50,000 - \$100,000
 - \$100,000 - \$300,000
 - \$300,000 - \$500,000
 - \$500,000+
 - Other (Please specify)

3. What are the current outputs and outcomes of the technology?

- *Question Type:* Paragraph
- *Guidance:* "Describe the measurable outputs of the technology, detailing what it produces, delivers, or achieves in the short term. Discuss the broader outcomes, focusing on the longer-term impacts, benefits, or changes caused by the technology. Include any quantitative data or qualitative insights that demonstrate its success or results. Mention relevant metrics, case studies, or real-world applications if available."

6. What are the expected outputs and outcomes of the technology?

- *Question Type:* Paragraph
- *Guidance:* "Focus on what you anticipate the technology will achieve in the future based on its current capabilities or planned improvements. Highlight both short-term outputs, which refer to immediate results or products, and long-term outcomes, focusing on broader, sustainable impacts. Discuss any projections, goals, or metrics that the technology aims to meet in the future. If possible, mention specific milestones or benchmarks for measuring success. "

7. What is the current adoption at the national level?

- *Question Type:* Multiple Choice (multiple can select)

○ *Options:*

- Adopted by private sector (Technology is used across various industries or private companies.)
- Pilot projects available (Technology is being tested in limited-scale pilot projects.)
- Adopted by public institutions and integrated into national programs (The technology is broadly used in the public sector and aligned with national strategies.)
- Under evaluation by stakeholders (Technology is being considered or assessed by potential users or stakeholders.)
- Limited adoption (Technology is in use, but on a small scale or in niche applications.)
- Under research and development (Technology is not yet adopted but is under development or testing.)
- Other (Please Specify)

8. Give information international scalability potential?

- *Question Type: Paragraph*
- *Guidance:* "Describe the technology's ability to be scaled and adapted for use in different international markets. Mention specific regions or countries where the technology could be successful and explain why, considering factors such as demand, market fit, and the regulatory landscape. Discuss aspects of localization, including language, culture, and infrastructure, as well as adaptability to different industries or sectors and the potential for widespread adoption. If applicable, reference any plans or actions taken toward global expansion, such as partnerships, trials, or funding for international scaling."

9. What is the total estimated cost of the technology for international scale?

- *Question Type: Multiple Choice (with ranges)*
- *Options:*

- \$0- \$10,000
- \$10,000 - \$50,000
- \$50,000 - \$100,000
- \$100,000 - \$300,000
- \$300,000 - \$500,000
- \$500,000+
- Other (please specify)

10. Is there a need for any resources/support during the internationalization of technology?

- *Question Type:* Yes/No
- If "Yes," ask:

10.1. What kind of resources/support will you need?

- *Question Type:* Checkbox
- *Options:*
 - Financial Support (Funding for R&D, scaling, or operational costs.)
 - Technical Support (Expertise, equipment, or infrastructure for development or deployment.)
 - Marketing Support (Promotion, branding, or market entry strategies.)
 - Regulatory Support (Guidance for compliance with laws, standards, or certifications.)
 - Mentorship or Advisory Support (Expert advice for business, technical, or strategic decisions.)
 - Human Resources (Skilled personnel or workforce training.)
 - Partnership Development (Support to industries.)
 - Intellectual Property Support (Assistance with patents, trademarks, or licensing.)
 - Production/Manufacturing Resources (Facilities, machinery, or processes for production.)
 - Data or Research Support (Access to data, market insights, or academic research.)
 - Networking Opportunities (Participation in industry events, conferences, or networking platforms.)
 - Legal Support (Contracts, agreements, or dispute resolution services.)
 - IT and Digital Infrastructure (Cloud services, cybersecurity, or software development support)
 - Other (Please Specify)

11. What are the barriers/challenges related to technology?

- *Question Type:* Multiple Choice (with ranges)
- *Options:*
 - Production Cost (High costs associated with manufacturing or scaling up production.)
 - Marketing (Challenges in promoting the technology or creating market awareness.)

- Distribution (Logistics, supply chain issues, or difficulties in reaching target markets.)
- Regulation (Compliance with laws, certifications, or industry standards.)
- Technological Complexity (Difficulty in developing, implementing, or maintaining the technology.)
- Lack of Skilled Workforce (Shortage of qualified personnel to develop or use the technology.)
- Funding Constraints (Limited access to financial resources for R&D, production, or commercialization.)
- Intellectual Property Issues (Challenges related to patents, copyrights, or technology protection.)
- User Adoption Resistance (Hesitation or reluctance from potential users to adopt the technology.)
- Infrastructure Limitations (Inadequate facilities, equipment, or support systems for deployment.)
- Market Competition (Intense competition from existing technologies or alternatives.)
- Cultural or Social Barriers (Challenges in aligning the technology with societal or cultural norms.)
- Environmental Concerns (Negative impact on the environment or sustainability challenges.)
- Cybersecurity Risks (Vulnerabilities or threats to the technology's digital aspects.)
- Other (Please Specify)

12. Has an intellectual property application been filed for the technology?

○ *Question Type:* Yes/No

• If "Yes," ask:

12.1. What is the status of intellectual property protection?

○ *Question Type:* Multiple Choice

○ *Options:*

- National patent application filed
- National patent application in the evaluation stage
- National patent registration available
- International patent application filed
- International patent application in the evaluation stage
- International patent registration available
- Utility model application made
- Utility model application in the evaluation stage

- Utility model available
- Other (please specify)

12.2. What is the status of intellectual property protection?

- *Question Type:* Paragraph
- *Guidance:* "Specify all the countries where the patent is protected using official country names. If the patent is protected in multiple countries, list them separated by commas. If the patent is protected worldwide or under a regional agreement (e.g., European Patent), mention that explicitly. Avoid abbreviations or informal terms."

13. Are there any existing license agreements?

- *Question Type:* Yes/No
- If "Yes," ask:

Give information about your license agreement?

- *Question Type:* Paragraph
- *Guidance:* "Provide details about your license agreement, including the type of license (e.g., exclusive, non-exclusive), the parties involved, the geographical scope, and the duration. Mention any key terms or conditions that are relevant. Be concise and avoid using overly technical or legal jargon unless necessary."

Section 3: Potential Local Impact

1. When your technology will be launched?

- *Question Type:* Multiple Choice
- *Options:*
 - Already launched
 - Within 6 months
 - 6 – 12 months
 - 1– 2 years
 - 2– 3 years
 - 3+ years
 - Other (Please specify)

2. Does the technology reduce costs for local businesses?

- *Question Type:* Multiple Choice
 - *Options:*
 - Yes
 - Partially
 - No
 - N/A
- 3. Does technology create new job opportunities in the local economy?**
- *Question Type:* Multiple Choice
 - *Options:*
 - Yes, it creates many new job opportunities.
 - Yes, it creates a limited number of job opportunities.
 - No, it does not create job opportunities.
 - N/A
- 4. Has the implementation of technology improved the level of education and competence in the community?**
- *Question Type:* Multiple Choice
 - *Options:*
 - Yes, there has been a significant improvement.
 - Yes, but limited improvement has been observed.
 - No, it has had no impact.
 - N/A
- 5. Does technology improve the quality of life of the community?**
- *Question Type:* Multiple Choice
 - *Options:*
 - Yes, significantly.
 - Partially improved.
 - No, no impact.
 - N/A
- 6. Do local communities have sufficient access to the technology?**
- *Question Type:* Multiple Choice
 - *Options:*
 - Yes, everyone has access.
 - No, access is limited.
 - No, access is not possible.
 - N/A

7. Does technology reduce energy consumption?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes
 - No
 - Partially
 - N/A

8. Has technology transformed existing practices or lifestyles of local communities?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, to a great extent.
 - Yes, but only to a limited extent.
 - No, it has not.
 - N/A

9. Does technology encourage innovative solutions in the local sector?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, to a great extent.
 - Yes, but to a limited extent.
 - No, it does not.
 - N/A

10. Has the technology changed existing methods used in the local sector?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, completely changed.
 - Partially changed.
 - No, it has not.
 - N/A

11. What is the rate of the technology diffusion at the local level?

- *Question Type:* Multiple Choice
- *Options:*
 - High
 - Medium
 - Low
 - N/A

12. How do local people generally evaluate this technology?

- *Question Type:* Multiple Choice
- *Options:*
 - Positive
 - Neutral
 - Negative
 - N/A

13. What is the biggest challenge in implementing technology at the local level?

- *Question Type:* Multiple Choice (multiple can select)
- *Options:*
 - Lack of Adequate Resources (Insufficient funding, infrastructure, or workforce for implementation.)
 - Social Resistance (Hesitation or opposition from local communities or stakeholders.)
 - Technical Incompatibility (Incompatibility with existing systems, standards, or infrastructure.)
 - Lack of Skilled Personnel (Shortage of qualified individuals to operate, maintain, or develop the technology.)
 - Regulatory or Legal Barriers (Challenges in meeting local laws, regulations, or approval processes.)
 - Cultural Misalignment (Mismatch with local traditions, beliefs, or societal norms.)
 - Environmental Concerns (Potential negative impact on local ecosystems or sustainability issues.)
 - High Implementation Costs (Excessive financial burden for deployment at the local level.)
 - Limited Awareness or Understanding (Lack of knowledge or awareness about the technology's benefits and use.)
 - Political or Institutional Barriers (Lack of support or resistance from local government or institutions.)
 - Connectivity and Accessibility Issues (Difficulty in reaching remote areas or providing necessary infrastructure.)
 - Dependence on External Support (Over-reliance on foreign expertise or resources for implementation.)
 - Economic Constraints of the Local Market (Inability of the local economy to support the adoption or utilization of the technology.)
 - Lack of Stakeholder Collaboration (Poor coordination among key stakeholders, such as government, businesses, and communities.)

- Other (please specify)
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Section 4: Feasibility

1. Can the technology be easily implemented using existing infrastructure?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, it is fully applicable.
 - Partially applicable, some modifications are required.
 - No, it requires major technical changes.

2. Is additional research or development work required to develop the technology?

- *Question Type:* Multiple Choice
- *Options:*
 - No, it is completely ready.
 - Yes, only a low level of effort is required.
 - Yes, a significant amount of R&D work is required.

3. Does the implementation require special expertise or equipment?

- *Question Type:* Multiple Choice
- *Options:*
 - No, can be implemented with existing resources.
 - Yes, but easily available.
 - Yes, hard-to-reach resources needed.

4. Are your existing financial resources sufficient to implement this technology?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, fully sufficient.
 - Partially sufficient.
 - No, additional financing is required.

5. What is the investment cost required for the development of the technology?

- *Question Type:* Multiple Choice
- *Options:*
 - Negligible (No significant investment required. The technology can be implemented with minimal costs using existing resources.)

- Low (Can be covered by the existing budget. Implementation is feasible within the organization's current financial capacity.)
- Medium (Additional financing may be required. Moderate investment is needed, and external funding sources might be required.)
- High (Large-scale investment required. Significant capital investment is essential for implementation.)
- Very High (Transformational or infrastructure-level investment required. Implementation requires a substantial financial commitment, such as building new facilities or major infrastructure upgrades.)
- Others (Please Specify)

6. What is the estimated return on investment (ROI) of the technology?

- *Question Type:* Multiple Choice
- *Options:*
 - 1 year or less.
 - 1 – 3 years.
 - More than 3 years.

7. Can the technology meet the targeted market demand?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, fully aligned with market demand.
 - Partially aligned, some adaptations may be required.
 - No, incompatible with market demand.

8. Are similar technologies available in the target market?

- *Question Type:* Multiple Choice
- *Options:*
 - No, this technology is unique.
 - Yes, but this technology provides a competitive advantage.
 - Yes, this technology is on par with existing competitors.

9. Are there significant barriers to market entry?

- *Question Type:* Multiple Choice
- *Options:*
 - No, completely smooth.
 - Partially, but surmountable.

- Yes, there are significant barriers.

10. Is the application of technology environmentally sustainable?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, completely sustainable.
 - Partially sustainable, there may be some impacts.
 - No, may pose environmental risks.

11. Does technology contribute to reducing carbon emissions?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, directly and significantly.
 - Yes, but with limited impact.
 - No, it does not make such a contribution.

12. Does the application of technology contribute to the local community and economy?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, it makes direct and measurable contributions.
 - Partially, there may be indirect benefits.
 - No, no direct contribution.

13. Does technology have the potential to create jobs?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, it creates significant employment.
 - Partially, it may offer limited employment opportunities.
 - No, this technology does not create employment.

14. What are the main risks for the implementation of this technology?

- *Question Type:* Multiple Choice (multiple can select)
- *Options:*
 - Financial Risks (Budget overruns, funding shortages, or high initial costs.)
 - Technical Risks (Failures during development, deployment, or integration with existing systems.)
 - Operational Risks (Challenges in day-to-day management, resource allocation, or maintenance.)

- Market Risks (Low demand, competition from other technologies, or inability to reach the target audience.)
- Regulatory and Compliance Risks (Difficulties in meeting legal requirements, obtaining certifications, or navigating complex regulations.)
- Social and Cultural Risks (Resistance from communities or cultural misalignment with local norms.)
- Environmental Risks (Negative impact on ecosystems, sustainability concerns, or resource depletion.)
- Cybersecurity Risks (Potential data breaches, hacking, or other vulnerabilities in digital systems.)
- Project Management Risks (Delays, mismanagement, or lack of skilled personnel to manage implementation.)
- Political or Institutional Risks (Lack of government support, policy changes, or institutional instability.)
- Adoption Risks (Reluctance from end-users or stakeholders to adopt the technology.)
- Scalability Risks (Challenges in expanding or scaling the technology to a broader audience.)
- Dependence on External Factors (Reliance on external suppliers, foreign expertise, or volatile resources.)
- Other (Please Specify)

15. How likely is the success of this technology for internationalization?

○ *Question Type:* Multiple Choice

○ *Options:*

- Very High Probability (The technology is highly innovative, has strong market potential, and aligns perfectly with international needs.)
- High Probability (The technology has a competitive edge and moderate barriers for entry into international markets.)
- Medium Probability (The technology has potential but may face significant competition or require substantial adjustments for global adoption.)
- Low Probability (The technology has limited differentiation, significant barriers, or may not align well with international markets.)
- Very Low Probability (The technology is unlikely to succeed internationally due to major challenges or lack of global relevance.)

- Uncertain/Requires Further Assessment (The technology's international success is unclear and requires additional analysis or validation.)

Section 5: Attachments

1. Website (if any, give a link to the share of the information, or dedicated website that promotes the technology)
 - *Question Type:* Short Answer
2. Visualization Needs (import a photo, graphic or scheme of the technology)
 - *Question Type:* File Upload (optional)

Section 6: Expert Opinion

1. General Assessment – How would you evaluate the overall potential of this technology
 - *Question Type:* Short Answer
 - *Guidance:* "Provide a balanced assessment of the technology by conducting a SWOT analysis that considers its strengths, weaknesses, opportunities, and threats. Evaluate its potential for growth, adoption, and impact in both the short and long term. Consider aspects such as market demand, technological innovation, competition, scalability, and sustainability. If applicable, mention any challenges that could hinder its success or areas for improvement."
2. Strengths and Weaknesses - What are the primary strengths and weaknesses of this technology from your perspective?
 - *Question Type:* Short Answer
 - *Guidance:* "Differentiate between the strengths and weaknesses of the technology by focusing on key factors such as advantages, unique features, and key benefits for strengths, limitations, challenges, and areas for improvement for weaknesses. Be specific in identifying any technological, operational, or market-related weaknesses. Offer a balanced view by

highlighting both the positive and negative aspects constructively, considering factors like performance, cost-effectiveness, ease of use, scalability, adaptability, and market potential.”

3. Market Fit - How well does this technology align with current market needs and trends?

○ *Question Type:* Multiple Choice

○ *Options:*

- Excellent (The technology perfectly addresses current market demands and aligns seamlessly with emerging trends.)
- Good (The technology meets most market needs and aligns with some important trends.)
- Average (The technology addresses certain market demands but may require significant adjustments to fully align with trends.)
- Poor (The technology has limited relevance to current market needs and trends.)
- Emerging Fit (The technology does not yet align with current needs, but has strong potential for future trends.)
- Other (Please Specify)

4. Scalability - What is your opinion on the scalability of this technology for broader markets?

○ *Question Type:* Multiple Choice

○ *Options:*

- Highly Scalable (The technology can easily expand to larger markets or increased demand with minimal additional costs or effort.)
- Moderately Scalable (The technology can expand to broader markets but requires some adjustments or investments to handle growth effectively.)
- Limited Scalability (The technology has restricted potential for scaling due to inherent limitations in design, infrastructure, or market relevance.)
- Not Scalable (The technology cannot adapt to broader markets without fundamental changes or significant barriers to overcome.)
- Regionally Scalable (The technology can expand within specific regions or sectors but may face challenges in entering global or unrelated markets.)
- Future Scalability Potential (The technology is not currently scalable but could become so with further development or strategic changes.)

- Other (Please Specify)

5. Competitive Edge - Does this technology have a distinct competitive advantage in the global market?

- *Question Type:* Multiple Choice
- *Options:*
 - Yes, Strong (The technology offers unique and highly differentiating features that provide a clear advantage over competitors globally.)
 - Yes, Moderate (The technology has some differentiating features but may require further enhancement to strengthen its global position.)
 - No, Limited Competitive Edge (The technology does not currently have significant differentiating factors compared to existing global competitors.)
 - Not Sure (Unclear whether the technology has a competitive edge due to lack of information or market data.)
 - Potential Competitive Edge (The technology has potential but requires additional development, marketing, or strategic alignment to establish a strong advantage.)
 - Other (Please Specify)

6. Expert Recommendation - What would be your primary recommendation for advancing this technology?

- *Question Type:* Short Answer
- *Guidance:* "Focus on actionable suggestions that could enhance the technology's performance, adoption, or scalability. Consider improvements in areas such as design, user experience, cost-efficiency, or market strategies. If the technology is in its early stages, recommend steps to refine or test it further; if it's more mature, suggest ways to expand its reach or impact. Prioritize recommendations that address current weaknesses or gaps while leveraging the technology's existing strengths."

7. Overall Rating - How would you rate the technology's overall potential on a scale of 1 to 10?

- *Question Type:* Multiple Choice
- *Options:*
 - 1 (Very low potential)
 - 2

- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 (Very high potential)