

# ETHICS MATURITY CONTINUUM

Discover why AI Ethics matters to your company's success and how to put it into action



EAIGG

BCV

E ETHICAL  
INTELLIGENCE





**In this day and age, successful operationalization of ethics in AI-driven startups has become *the* competitive edge.**

By striving to design and develop AI with ethics at the core, startups can maximize their impact and continue to grow in a market environment where values are becoming increasingly important to success.

To aid in this process, the Ethics Maturity Continuum has been designed to quickly assess a company's level of ethics maturity and identify areas for improvement. It prioritizes agility and action, enabling users to build concrete strategies for sustainable AI systems and track development overtime. Most importantly, it empowers startups to embed ethics from the very beginning, resulting in stronger products, happier customers and more favorable exits.



# CONTINUUM BACKGROUND

"AI ethics is a set of values, principles, and techniques that employ widely accepted standards of right and wrong to guide moral conduct in the development and use of AI technologies."

- Alan Turing Institute

In recent years, the impressive advances in the capabilities and applications of AI systems have brought the opportunities and risks of AI for society into sharper focus. In order to maximize the benefits and mitigate the risks, the field of AI Ethics has quickly spread through the development of tools, frameworks, and Ethics as a Service products designed to ensure that algorithms are built with ethical principles at the core.

To aid in this adoption of ethics, the majority of global technology companies have deployed ethical frameworks and policies, while multiple governments have released similar high-level frameworks. As enterprise and regulation begin to require ethical technology practices, the challenge becomes for startups to understand how to build these practices into the company and technology from the very beginning.

The Ethics Maturity Continuum consolidates the best practices of these global frameworks and policies to determine the key factors for ethical tech development for early and late stage startups. These key factors have then been translated into a comprehensive model that provides a method for assessing a startup's ethical development along with clear actions points for improvement.

# BENEFITS FOR STARTUPS

Responsible AI, when used to its full potential, is a source for competitive advantage. Building ethics into technology and product management has a number of business benefits, including:



## Enhanced Product Quality

Incorporating responsible AI practices throughout the product development lifecycle results in better alignment with customer wants and needs



## Employee Retention

Ethical practices significantly benefit talent acquisition, retention, and engagement, especially in the current competitive labor market



## Sustainability

Focus on value-sensitive design leads to better data management which reduces digital waste and increases sustainable practices



## Regulation readiness

Companies must stay ahead of AI regulation to remain competitive and active on a global scale



## Increase Growth

Ethics improves top-and bottom-line growth by increasing customer engagement, broadening revenue streams, and offering procurement advantages in competitive bidding processes



## Brand Loyalty

Heightened focus on the sector has increased the importance of customer loyalty to brands they can trust

# BENEFITS FOR STAKEHOLDERS

One of the most important elements to a startup's ultimate success is its relationship to both internal and external stakeholders. Internally, the focus is on creating a healthy work environment that will attract and retain top-talent while increasing strong decision-making to reduce costs and increase potential for favorable exits. Externally, the purpose is to create a product that best serves a scalable base of customers while taking into consideration the impact of the technology on society at large. The implementation of ethics efficiently and effectively supports the strengthening of both sides of these vital relationships.

## INTERNAL

## EXTERNAL



### Practitioners

Establishing bottom-up culture of ethical decision-making leads to confidence in product development and streamlined collaboration



### Customers

Implementing ethics builds customer trust and loyalty which reduces customer churn



### Executives & C-Suite

Reduces long-term costs in fixing technical problems as well as attracts and retains top-talent employees



### Users

Smoother user experience for wider base of customers (i.e. design decisions factoring in diverse user-base and edge cases)



### Board & Investors

Creates consistent and measurable implementation of ethics that leads to an increase in potential of favorable company exit



### General Public

Intelligent consumers demand ethical, safe, and private technology. Public perception of technical tools is key in ensuring their success

# THE CONTINUUM FRAMEWORK

The Continuum is designed for startups and investors to be able to assess the level of maturity a company has achieved in operationalizing AI Ethics. Startups are divided by Early (Seed-Series B) and Late (Series C+) Stage and then assessed on the following five criteria.

## **Accountability**

When someone is accountable it means they are answerable for the results of an action after it has been performed. AI accountability means that a company deploying AI systems has designated roles that are both answerable for the impact of the AI systems as well as responsible for AI governance within company processes.

## **Intentional Design**

Successful AI design focuses on creating products that serve human-centric needs, either on the individual or societal level. Intentional design goes a step further by ensuring significant thought and consideration has gone into understanding potential intended and unintended consequences of designing an AI product to serve such needs.

## **Fairness**

Unwanted bias occurs when system based decisions are made using individual traits that should not otherwise correlate to the outcome (i.e. gender being used as a deciding factor for job applicants). Fairness seeks to minimize instances of this unwanted bias and instead promote inclusive representation in AI development.

## **Social Impact**

AI has the potential to impact not only vast numbers of individuals but also shape the societies in which we function. It is therefore essential to consider the short- and long-term effects the introduction of an AI product will have, giving particular attention to the wellbeing of end-users.

## **Trust & Transparency**

Data is information on individuals and collective behavior, which means users must be able to clearly understand how their data is being handled and protected. In addition to transparent communication and robust security, the user must feel that their information remains as private as they so want, the combination of which results in strong user trust.

# Accountability

## Early Stage Seed-Series B

---

### Level of Maturity

#### Below

No one in the company is currently responsible for AI governance



### Action for Improvement

Founder(s) or CEO should immediately assume responsibility for AI governance

#### Average

Founder(s) is responsible for AI governance



Founder(s) should create and hire for internal position responsible for building the company's AI governance protocols

#### Exemplary

Company has a separate Head of Product Management whose responsibility includes AI governance



Head of Product Management should establish specific OKRs for AI governance

## Late Stage Series C+

---

### Level of Maturity

#### Below

Company has established a Head of Product Management responsible for AI governance; but has no external auditing or advisory



### Action for Improvement

Head of Product Management establishes OKRs for AI governance that should be shared with external auditors and/or advisors

#### Average

Company has a Head of Product Management responsible for AI governance and an AI Ethics advisor on the Board of Directors



Quarterly reports should be issued on AI governance OKRs and external advisors on AI Ethics should be secured

#### Exemplary

Company has a C-level executive responsible for AI and is supported by an external AI Ethics advisor or board



Establish an assessment process to continually check for Accountability implementation



# Intentional Design

## Early Stage Seed-Series B

---

### Level of Maturity

#### Below

No work has been done to understand and document unintended consequences of the product



### Action for Improvement

Review of unintended consequences should be undertaken and completed within 60 days

#### Average

Company has systematically documented unintended consequences, along with supporting processes to periodically evaluate the product for customer risks



An intentional design review process that assesses for unintended consequences should be established utilizing third party frameworks

#### Exemplary

Company documentation of unintended consequences utilizes third party frameworks, and is conducted with ongoing assessment of risk impact for customers



The intentional design review process is implemented on an ongoing basis as part of the AI product management protocol

## Late Stage Series C+

---

### Level of Maturity

#### Below

Company has issued clear documentation and reporting on risk and governance



### Action for Improvement

OKRs should be established for the intentional design review process and regularly assessed

#### Average

Company generates regular quarterly reporting on risk metrics, governance and values to Board of Directors



Independent third parties should be contracted to conduct external audits of the intentional design process and unintended consequences

#### Exemplary

Company generates regular quarterly reporting and metrics on risk, governance and values to Board of Directors, and undergoes regular external audits completed by independent third parties



Establish an assessment process to continually check for Intentional Design implementation





# Fairness

## Early Stage Seed-Series B

---

### Level of Maturity

#### Below

No efforts have been made to assess training datasets for bias



### Action for Improvement

Documentation of all potential unwanted bias should be made and assessed for in all datasets and models within 90 days

#### Average

Consistent efforts are made to assess datasets and AI models for fairness



Consistent fairness metrics should be selected and integrated into model development and data management

#### Exemplary

Data, AI, and outcomes are all continually monitored, evaluated, and reported to the Board of Directors for specific fairness metrics



Quarterly assessments should be conducted on all system based decisions to evaluate for fairness and explainability

## Late Stage Series C+

---

### Level of Maturity

#### Below

Consistent efforts are made to assess datasets and AI models for fairness with clear explanations given for any system based decision



Dashboard that monitors for fairness metrics should be procured

#### Average

Third party tools and frameworks are utilized to assess datasets and AI models for fairness, with clear explanations given for any system based decision



Company initiatives should be established specifically to build and improve on current external fairness metrics and frameworks

#### Exemplary

Company has referenced third party frameworks to either champion or develop their own industry leading tools for assessing fairness in datasets and AI models, and actively contributes to industry thought leadership on fairness and explainability



Establish an assessment process to continually check for Fairness implementation



# Social Impact

## Early Stage Seed-Series B

---

### Level of Maturity

#### Below

No efforts have been made to align company mission to a clear set of values



### Action for Improvement

Mission statement and values should be developed within 30 days and published on company website

#### Average

The company has published its mission and values as well as clearly demonstrated how these are being utilized in critical decision making and considering the wellbeing of the end-user



Wellbeing metrics should be established to help monitor the impact of the company mission and values

#### Exemplary

Well established metrics are used within the company to measure the mission and values that impact the wellbeing of the end-users



Wellbeing metrics should be incorporated into product design lifecycle

## Late Stage Series C+

---

### Level of Maturity

#### Below

The company has published its mission and values as well as clearly demonstrated how these are being utilized in critical decision and considering the wellbeing of the end-user



Metrics should be expanded to include assessment for both short- and long-term wellbeing of end-users

#### Average

Company uses internal KPIs to measure both the short and long-term well-being of end-users, and has clearly demonstrated how its mission and values are being utilized in critical decision making



Quarterly reporting on all wellbeing metrics in the product design lifecycle should be established

#### Exemplary

Company generates public reports using external KPIs that measure short and long-term well-being of the end-users. Company has published use cases demonstrating how its mission and values are implemented and utilized in critical decision making



Establish an assessment process to continually check for Social Impact implementation



# Trust & Transparency

## Early Stage Seed-Series B

---

### Level of Maturity

#### Below

No considerations have been made for user privacy



### Action for Improvement

A user privacy document on how data is being managed and used should be developed and published on the company website within 90 days

#### Average

There is a clear data privacy strategy and established channels of communication with the user



Either product management or CISO should be assigned responsibility for the user privacy document and a clear channel for user feedback should be established

#### Exemplary

Data privacy strategy is owned by product management or CISO, and is clearly communicated to users. A well-defined process for user feedback on product has been established



Responsibility for GDPR compliance is assigned and basic customer advocate program should be established

## Late Stage Series C+

---

### Level of Maturity

#### Below

Company is GDPR compliant with clear data collection protocols, and has established some channels of communication with end-user



### Action for Improvement

Customer advocate program should be expanded and basic data breach protocols should be put in place

#### Average

Company is GDPR compliant with a clear privacy strategy on data collection and misuse of information, and clear communication channels have been established with end-users. Basic data breach protections have been put in place



GDPR compliance should be assigned to the DPO, user privacy, security and communication assigned to the CPO, and Soc2 compliance should be sought

#### Exemplary

DPO is responsible for GDPR compliance and CPO owns privacy strategy on data collection and misuse of information. Company is Soc2 compliant and data breach protections undergo regular third party assessments to demonstrate robust cybersecurity strategy. Additionally there are established communication and feedback channels with end-users



Establish an assessment process to continually check for Trust and Transparency implementation



# FINAL REMARKS

AI technology has exploded in popularity over the last 10 years, with each wave of technical breakthroughs ushering in potential for consumers and companies alike. In order to fully maximize the benefits of AI, companies need to incorporate robust AI Ethics into the business from the very beginning stages of development.

Currently, global technology firms are deploying AI Ethics frameworks while governments look to require ethical practices through regulation. However, frameworks and regulations alone cannot ensure ethical technology in practice. Ensuring that AI algorithms behave ethically requires assessment, measurement, and consistent improvement. It requires both the technical capability to develop fair, unbiased, and safe AI, as well as the people and processes to ensure the company deploying AI is responsible and transparent with their consumers. As AI becomes increasingly important to the startup market, companies will need to scale up their capabilities to assess, audit, and review AI technologies for ethical concerns.

**Understand where you stand on the Continuum,  
self-assess at [www.EAIGG.org](http://www.EAIGG.org)**

# FURTHER RESOURCES

- [The Global Landscape of AI Ethics Guidelines](#)
- [A Unified Framework of Five Principles for AI in Society](#)
- [An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations](#)
- [IEEE Ethically Aligned Design](#)
- [The Business Case for AI Ethics](#)



# ACKNOWLEDGEMENTS

Anik Bose, Venkat Raghavan, Emmanuel Benhamou  
Benhamou Global Ventures LLC

Olivia Gambelin, Alayna Kennedy  
Ethical Intelligence Associates, Limited