Team
Essentials
for AI
Workbook

Enterprise
Design
Thinking

How to use your workbook

Think of this workbook as your journal. Paste in images of your process, take out pages, add new pages, duplicate pages, and draw in it. Keep it with you, always. This handbook should evolve as you design your AI experience.

"You can use an eraser on the drafting table or a sledgehammer on the construction site."

– Frank Lloyd Wright

A symbiotic relationship

Humans must augment the machine so the machine can augment the humans.

Human augments machine

Machine augments human
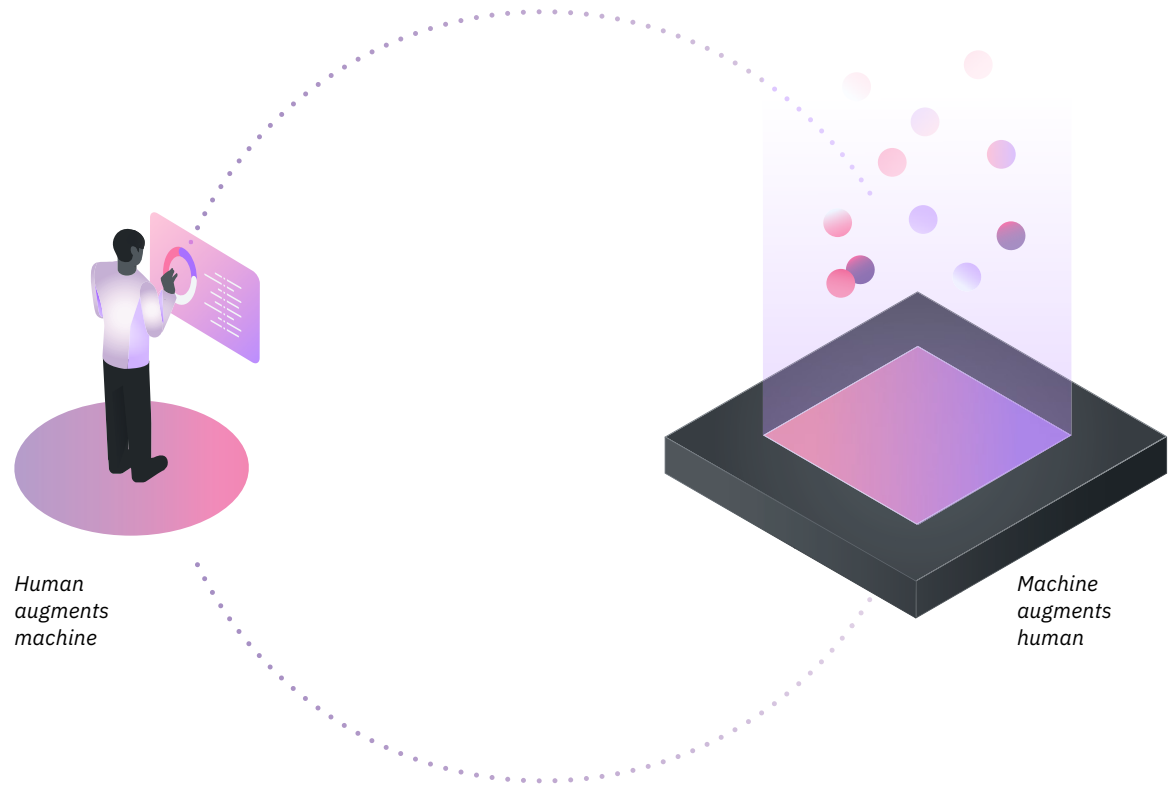
What are you trying to accomplish?

When in doubt, always design for people first and what they value.
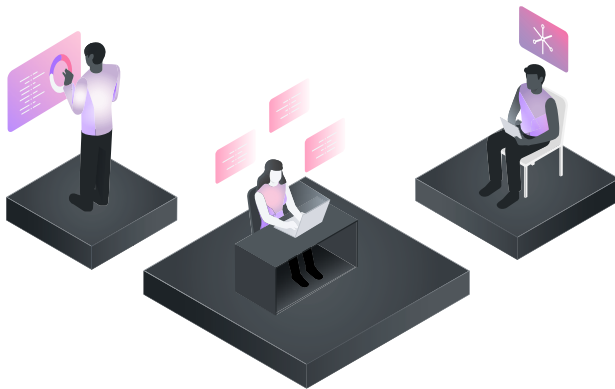

You're here because you have some level of interest in designing an AI experience.

artificial intelligence design
the purpose, planning, or intent behind simulated human thought processes

Why do we use AI?
To achieve higher quality outcomes faster than humanly possible

Let's get started

Add a sticky note

Describe the project you want to pursue.

Why do you think AI makes sense for this project?

Diverse Empowered Teams

Diverse teams see the same problem from many angles. They better understand any given situation and generate more ideas. Diverse teams solve problems more effectively.

Empowered teams are equipped with the expertise and authority to deliver outcomes without relying on others for leadership or technical support. By pushing operational decisions down to the lowest level, we give our teams the ability to achieve the rapid iteration our users and clients demand.

The Clearbridge team has a diverse team with people that can view a problem from many perspectives.

The Clearbridge team is empowered to make their own decisions.

Think about whom you need to lean on in order to design an AI experience. These people could be peers, stakeholders, executives, users, subject matter experts, etc.

Add a sticky note

Name:

Job role:

How could this person help?

Add a sticky note

Are any roles missing on your team?

What other expertise do you need? Fill this in as you continue through the AI Essentials Framework.

Do your research

Research is required to inform your decisions and strategy. To successfully design for AI, you must understand the machine. However, the machine (AI) is just 1 element within a larger system.

Assumptions and Questions

What assumptions and questions do you have about your project? These can be about your users, your business needs, your team, your stakeholders, your need for AI, etc. Visit the Enterprise Design Thinking Toolkit to learn how to run through this activity.
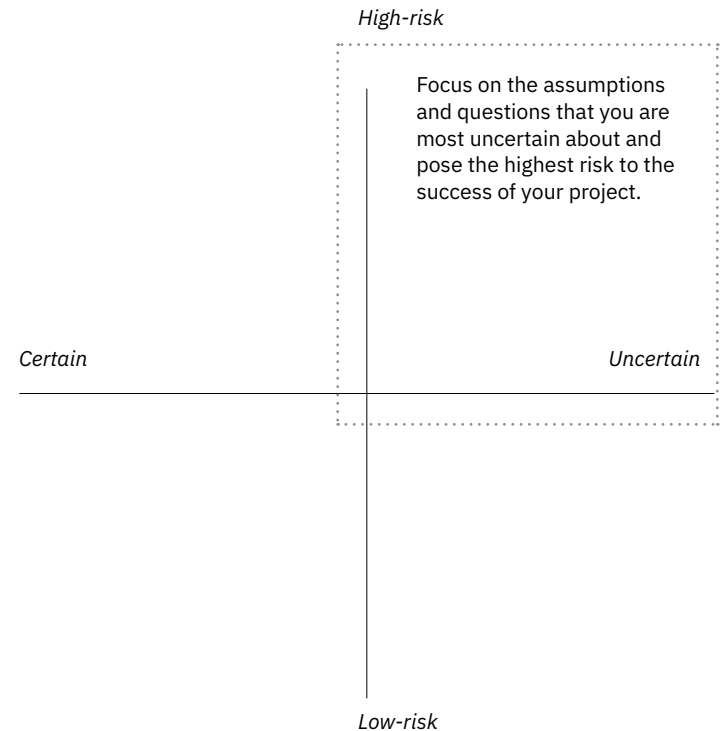

AI ecosystem
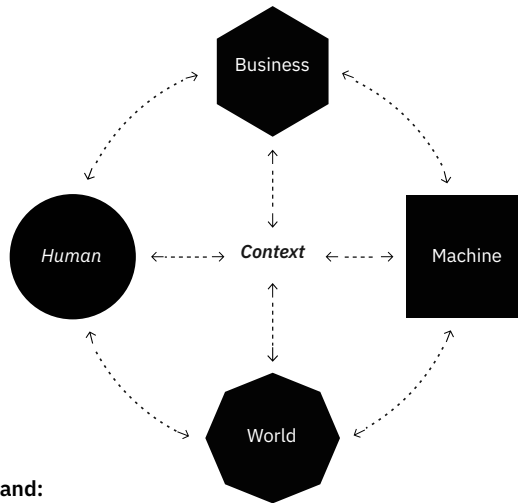
You must also understand:

1. your business needs and intent to drive the purpose of the machine

2. the needs of your users, which you can solve, and how you plan on solving them

3. the data you can use to train your machine

Assumptions and Questions

High-risk

Focus on the assumptions and questions that you are most uncertain about and pose the highest risk to the success of your project.

Certain   *Uncertain*

Low-risk

Assumptions
and Questions

What research will you need to
address the assumptions and
questions?

Add a sticky note

Place an assumption or question
which you're uncertain about and is
high-risk to your project here.

*How will you validate your assumption or
uncover an answer to your question?*

*How will you validate your assumption or
uncover an answer to your question?*

*How will you validate your assumption or
uncover an answer to your question?*

Empathy Map

Empathy Maps help synthesize your team's collective knowledge about your user persona, bringing you closer to a common understanding of who they are. Reference the Enterprise Design Thinking Toolkit to learn how to run through the Empathy Map activity.

Says

Thinks

Does

Feels

As-is pain points

Reference the Enterprise Design Thinking Toolkit to learn how to develop an As-is Scenario Map. As you conduct research and gain insight into your users' experiences, document common pain points you uncover here.
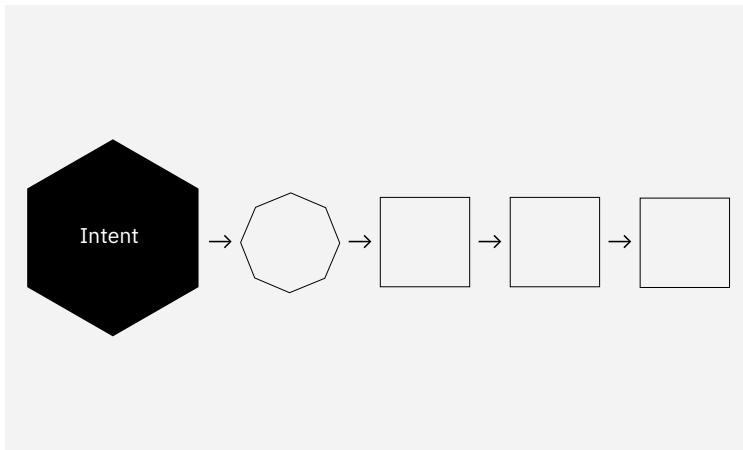
Add a sticky note

Write down a pain point in your users' experience.

Print more as needed

Define your intent

Align your team on the intersection between your business and user intents. This will help you determine why you would or wouldn't use AI in your effort.

6 core AI intents

What are you trying to accomplish for your users? Think about both the needs of your business and the needs of your users. What does success for both look like?

With AI, we enable our users to:

Accelerate research and discovery
Conduct rigorous, domain-specific research faster by using machine learning and AI to comb through your data and extract the information you find most important.

↓

Enrich your interactions
Understand and communicate with customers and employees using natural language, responding to their needs with tailored dialogue and personalized experiences.

↓

Anticipate and preempt disruptions
Monitor your systems and equipment at all times to identify and address potential issues before they become larger, more expensive problems.

Recommend with confidence
Make more confident, targeted recommendations using AI to evaluate a broad set of information based on an understanding of the parameters that are important to you.

↓

Scale expertise and learning
Collect know-how from experts and combine it with the latest information from your industry to create a deep source of tribal knowledge that all employees can access on-demand.

↓

Detect liabilities and mitigate risk
Use AI's understanding of the written word to identify risks to your company, particularly in terms of regulatory compliance.

Align on your intent

Add a sticky note

Write down the core AI intent you chose to help guide the AI intent for your project.

Add a sticky note

Write down the AI intent you came up with during the intent activity.

The intent activity will get you from a core AI intent to an AI intent you can move forward with.

Add a sticky note

Add another core AI intent if it makes sense for your project.

How would your users benefit from the intent above?

How would your business benefit from the intent above?

Come up with big ideas

Reference the Enterprise Design Thinking Toolkit to learn how to come up with big ideas. Record a few of your ideas here. Then, document the idea you want to move forward with on the next page.

Add a sticky note

Title your big idea and provide a written description.

Use a thick permanent marker to illustrate your idea on a second sticky note.

Your big idea

Place your best idea here. You will refine this idea later.
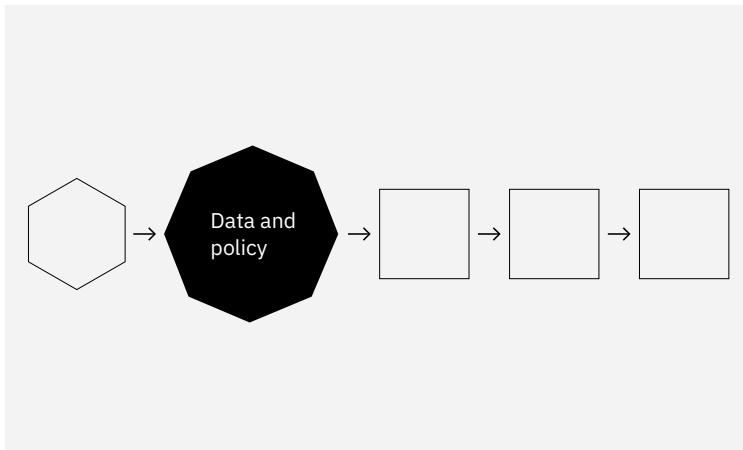
Add a sticky note

Write down the title and description of your best idea here.

Add a sticky note

Place an illustration of your big idea here.

Identify your data

It's time to get specific about all the data sources at your disposal. Don't hold back as you think through any and all data that can be used to accomplish your intent.

Data is a critical part of the AI equation that often gets overlooked or minimized at an enormous cost. The process of getting usable data takes hard work, and requires hitting 2 big checkboxes: quantity and quality.

Data takes many forms, like system logs, multimedia, and weather conditions. For the sake of brainstorming, think of the data your AI will need through 3 lenses: publicly accessible data, private data, and user-specific data.

Public data

Public data can be found in the world (publicly or for purchase). For example, census data is free and highly accessible. Anyone can go download those spreadsheets. Even social media hashtags, likes, and comments are public data. Sometimes, free public data isn't enough. Businesses regularly purchase additional demographic data for user segmentation.

Private data

Private data is owned and held by your business and often provides a competitive advantage. For example, this can take the form of employee records, hardware assets, deliveries, and payroll.

User data

Finally, user data is held directly by end users. Think contact information, medical history, or geographic location. Because these belong to the user, businesses must ask for access to store and/or use the data.

Find your data scientist

Data scientists are experts in managing large volumes of structured and unstructured data. They are responsible for building, maintaining, and monitoring the models that will interpret the data.

Data we have

Document any and all data you have that you need to accomplish your intent.

Add a sticky note

Capture all forms of data you have. Note whether it's public, private, or user data.

Data we need

Document any and all data you don't have that you'll need to accomplish your intent.
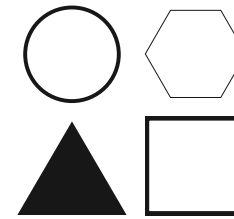
Add a sticky note

Capture all forms of data you need or want. Note whether it's public, private, or user data.

Help your AI understand

Think of your AI as a digital toddler. Toddlers are mostly blank slates and must be taught a lot before they can go out and become craftsmen, experts, or artisans.


To illustrate the difference between rule-based and machine learning, imagine 2 ways of explaining triangles to someone who has never seen them. One way to do it is to explain the rules ahead of time, e.g. a 3-sided shape is always a triangle.
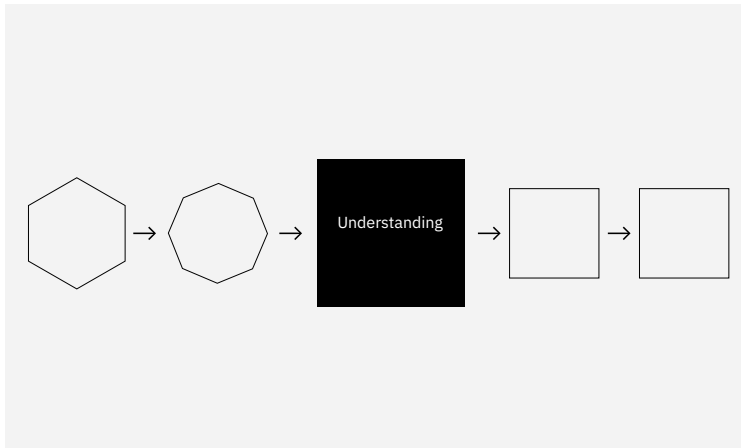
You will have to teach your AI the ins and outs of your domain by training it on the data that you have. Over time, it will begin to learn jargon, trends, and patterns in the data that it will use going forward.

AI models are taught—not explicitly programmed. In other words, instead of spelling out specific rules to solve a problem, we give them examples of what they will encounter in the real world and let them find the patterns themselves.
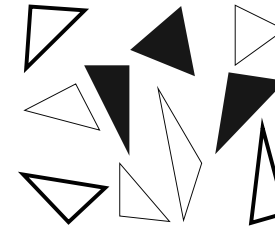
Alternatively, you can put thousands of triangles in front of someone and let them find the overlapping characteristics that define a triangle.

Enabling machines to find patterns is better than spelling out the instructions when the instructions are hard, unknown, or when the data has many different variables. Think about treating cancer or predicting the stock market.

The goal of the understanding activity is about determining what to train AI on so it can find the right patterns and connections.

Add a sticky note

Place a data source you have/need here. Break it down. What variables, jargon, or concepts will your model need to gain context and begin to understand your domain?

Finding meaning through resasoning
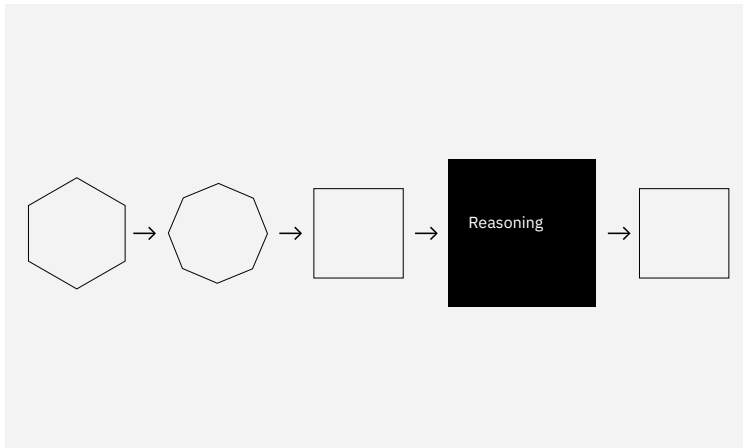
The goal here is to revisit your big ideas and bring them down to earth. Seeing your ideas in the context of what's feasible is crucial in getting to those actionable steps as you deliver on your AI experience.

Machine learning is all about how your system will reach conclusions from its understanding of the data it ingests. This is the part where the rubber really hits the road.

Ensure all ideas are grounded in reality, and scale them back if needed. Re-envision, edit, and tinker with your big idea(s) if necessary. Make sure that you finish with a reasoning statement that can serve as a blueprint for your team moving forward. This is especially useful to keep you

focused in the future as you scale the service or produc). Think about any assumptions you might've made in the workshop. Make sure you validate your assumptions. Follow up on any extra information you need.

How will you maintain your intent as your AI evolves over time?

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My original big idea

Add a sticky note

Place your original big idea here.

Reasoning statement structure:

[Business] can [intent] by [big idea] based on [the AI's data and understanding].

My reasoning statement:

My refined big idea

Add a sticky note

Place your refined big idea here.

Add a sticky note

Write down your reasoning statement here.

Analyze what your AI will know

Your goal is to design a healthy relationship between your AI and your users. It should endure over time, as needs and values change. The value of AI isn't a short term solution; it's a commitment to a long term relationship with your users.

Your job is to keep your users empowered, and that starts with understanding every way the relationship could be undermined, by accident or by design.

How do the implications or potential negative effects of your AI change how or if you move forward?

_____

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How could you eliminate or mitigate these negative effects right now?

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So, you've scoped your big idea(s), using your conclusions from the data, understanding, and reasoning activities. What are the implications of everything you've discovered?

When we say implications, we mean you should think beyond the primary purpose of your product. Think about the ripple effects you and your team are accountable for.

Incorporate the reflection you did here into every decision you make moving forward. Set up time to check in with your team to leverage or create tactical safeguards and checkpoints. have open and

honest conversations about the repercussions of your decisions.

Primary effects

The intended value of your AI to
your business and users

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Secondary effects

Any unintended benefit that your AI
gives to your business or users

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Tertiary effects

The unintended consequences of
your AI that could negatively impact
your business or users

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Develop a future experience

Add a sticky note

Draw the experience your user will go through, and add a brief description.

Notes

Next steps

Place your reasoning statement and Storyboard big and bold in a place where every person with a stake in this project can see it.

As you start to make your plan a reality, reference this workbook often. Allow it to evolve. We know you'll design a great human-centered AI experience.

– The Enterprise Design Thinking Team