



X, The  
Moonshot  
Factory

# Breakthrough Innovation Strategy

Drive innovation, navigate uncertainty, and turn  
big ideas into real-world impact.

COURSE SYLLABUS

# Unleash 10X Innovation

Innovation is no longer optional. It's how you move ideas forward, influence teams, and stay relevant in a fast-changing world. That's why MasterClass partnered with X, The Moonshot Factory, Google's Innovation Lab, to create a course for people who want to drive change.

You'll learn from the minds behind projects like Waymo and Wing, while building practical skills to shape ideas, test them quickly, and get buy-in across your organization. You'll work through the Moonshot Blueprint, learn how to prototype with AI, and pitch with stories that sell.

In this 20-hour, hands-on course, you'll create your own Moonshot Launch Plan and earn a certificate signed by Astro Teller — proving you understand what it takes to lead impactful innovation in the real world.



# What's in It for You

## ✓ Taught by innovation experts

Learn from the people shaping the future who have worked on projects like Waymo, Wing, and Google Brain.

## ✓ Frameworks that work

Access frameworks and systems used by The Moonshot Factory to spot innovation, solve problems, test ideas, and lead change.

## ✓ Unlock a bold mindset

Shift how you think, lead, and create so you can turn big ideas into real momentum at work.

## ✓ A pitch-ready plan

Synthesize what you've built — mindset, problem frameworks, and testing plans — into a Moonshot Launch Plan.



# Real Skills. Real Transformation.



## **Innovate at a 10X scale.**

Build the mindset, culture, and systems to tackle complex problems.



## **Blueprint the impossible.**

Use frameworks to turn “what if” ideas into actionable plans.



## **Test like a Moonshot innovator.**

Use AI and Moonshot frameworks to explore, prototype, and test your ideas.



## **Build belief.**

Craft pitches that win stakeholders’ buy-in for your ideas.



## **Prove you’re an innovation leader.**

Create your own Moonshot Launch Plan that proves you can bring innovation to life.

AI-POWERED PROTOTYPING

BOLD LEADERSHIP

FOSTER CREATIVITY

DECISION-MAKING

DEFINING METRICS

INNOVATION MINDSET

RADICAL INNOVATION

RAPID EXPERIMENTATION

STORYTELLING FOR BUY-IN

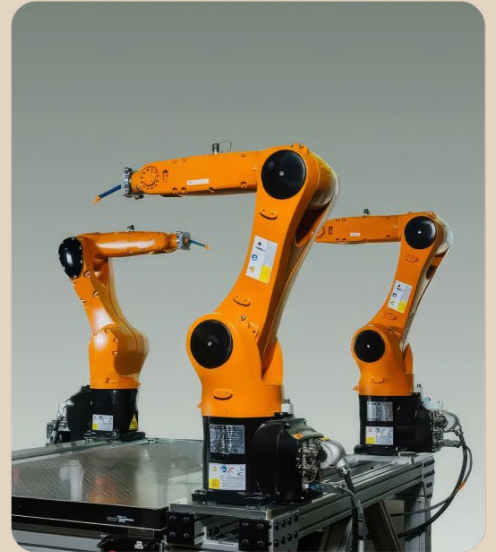
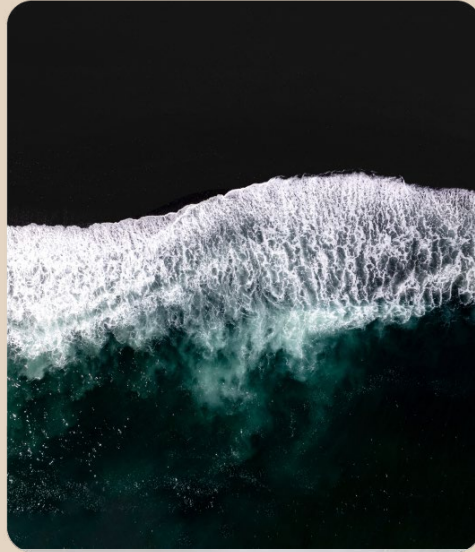
STRATEGIC PROBLEM-FRAMING



# Course Outline

| MODULES                                    | DURATION                          |
|--|-----------------------------------|
| 1. Welcome to the Moonshot Factory         | 🕒 9 lessons   1 hour 15 mintues   |
| 2. Your Moonshot Blueprint                 | 🕒 9 lessons   3 hours 20 minutes  |
| 3. Your Moonshot Market                    | 🕒 4 lessons   1 hour 5 minutes    |
| 4. Your Moonshot Mindset & Culture         | 🕒 12 lessons   2 hours 40 minutes |
| 5. 10X Storytelling                        | 🕒 4 lessons   1 hour 25 mintues   |
| 6. Rallying Support                        | 🕒 6 lessons   1 hour 35 minutes   |
| 7. Pressure Testing Ideas                  | 🕒 8 lessons   2 hours 30 minutes  |
| 8. Fast & Scrappy Prototyping              | 🕒 8 lessons   2 hours 35 minutes  |
| 9. Your Audacious Challenge                | 🕒 3 lessons   1 hour 10 minutes   |
| 10. Capstone Project: Launch Your Moonshot | 🕒 6 lessons   1 hour 45 minutes   |





# The Moonshot Factory

The Moonshot Factory, Google's Innovation Lab, is home to the minds behind self-driving cars, AI-powered agriculture, and light-beam internet. Their mission? Solve problems so big, they sound impossible — until they're not. Inside this lab, teams turn bold ideas into real-world breakthroughs using a proven system of prototyping, testing, stakeholder mapping, and storytelling. It's where ambition meets execution. And now, for the first time, you can learn their method. This is your chance to think like a Moonshot leader — and learn how you can turn bold thinking into real impact.



# Your Instructors

## Astro Teller

CAPTAIN (CEO)  
OF MOONSHOTS

As Captain of The Moonshot Factory, Astro has overseen the creation and launch of world-changing innovations like Waymo, Google Brain, and Wing. A PhD in AI, serial entrepreneur, and successful author, he's pioneered advances from wearables to autonomous tech, blending science, invention, and creativity.

---

## Dr. Julia Ling

AI LEADER, X,  
THE MOONSHOT  
FACTORY

Julia is an applied AI leader at X, The Moonshot Factory, addressing challenges in transportation, ocean health, the built environment, and more. She is an experienced AI start-up executive and holds a PhD in engineering. She is a pioneering researcher recognized for applying AI to complex challenges.

---

## Ivo Stivorc

VICE PRESIDENT &  
LT. TROUBLE+MAKER

For the last decade Ivo has led projects tackling some of the world's most pressing problems, from ocean health, to the electric grid, to applied robotics. A wearable tech pioneer and holder of 90+ patents, he's been named among the top innovators shaping the future of electronics.

## Joe Sargent

DIRECTOR OF  
ENGINEERING  
& PROTOTYPING

From creating props for *Iron Man* to leading builds for *MythBusters*, Joe has spent his career turning wild ideas into reality, creating groundbreaking tech, special effects, and inventions that push the boundaries of what's possible.

---

## Page Crahan

PROJECT LEAD,  
TAPESTRY

Page drives AI innovation for a cleaner, more reliable electric grid. A founder, patent-holder, and leader at unicorn start-ups Sunrun and Konfío, she's recognized among the top voices in climate tech and is an award-winning industry leader.

---

## Libby Leahy

CHIEF STORYTELLER

Libby translates radical science into inspiring narratives. She's led high-stakes launches, crisis comms, and global campaigns that have brought iconic moonshots like Loon, Wing, and Taara to the world stage.

# Module Overviews



# Welcome to the Moonshot Factory

🕒 9 LESSONS | 1 HOUR 15 MINUTES

Meet your instructors and explore the inner workings of X, The Moonshot Factory — Google’s Innovation Lab. Get an inside look at bold projects, the values and systems that drive them, and how this course will equip you to think and act like an innovation leader.

## Learning Outcomes

- **Explore** X, The Moonshot Factory, why it exists, and its unique approach to systematically producing innovative, good-for-the-world companies by pursuing “Moonshots,” which are big ideas to solve some of the world’s most pressing problems.
- **Explain** how this course works, including the purpose of the Moonshot Blueprint and how you’ll use it to create your capstone project.
- **Recognize** how mindset, fear, and perfectionism often get in the way of innovation — and learn how to navigate around them.

## Key Activities

- **Reframing exercise:** Reflect on past projects through a 10X lens.
- **Self-assessment:** Evaluate your current approach to innovation, experimentation, and failure.

## Resources Included

- ▶ 2 Videos
- ☰ 4 Articles
- ✍ 2 Activities
- ☑ 1 Quiz

# Your Moonshot Blueprint

🕒 9 LESSONS | 3 HOURS 20 MINUTES

Shape your idea using the 3-part Moonshot Blueprint, a method for identifying huge problems, radical solutions, and breakthrough technology or concepts.

## Learning Outcomes

- Set the foundation for your Moonshot capstone.
- **Understand** how to use axioms, define a project mission, and how to apply these frameworks to build the foundation for your idea.
- **Draft** axioms, a mission, and a Moonshot Blueprint by framing a huge problem, imagining a transformational product or service, and identifying potential breakthrough technologies or concepts.

## Key Activities

- **Brainstorming activity:** Use The Moonshot Factory's technique for drafting early Moonshot ideas.
- **Moonshot Blueprint drafting:** Write a “what if” statement, a mission, and a rough blueprint for your capstone project.

## Resources Included

- ▶ 2 Videos
- ☰ 2 Articles
- ✍ 5 Activities
- ☑ 1 Quiz

# Your Moonshot Market

🕒 4 LESSONS | 1 HOUR 5 MINUTES

Learn how Xers apply market research and listening strategies to hunt for potential moonshots. You'll surface your own “what if” idea to kick-start your own innovation plan.

## Learning Outcomes

- Connect problem, purpose, and profit.
- Recognize how The Moonshot Factory searches for, spots, and creates market opportunities for bold innovation.
- Articulate a personal “what if” idea to spark your Moonshot.

## Key Activities

- **10X thinker’s visioning exercise:** Write a bold idea to plant the seed for your Moonshot.
- **Self-assessment:** Get clarity on your knowledge and readiness to create a Moonshot in your industry.

## Resources Included

- ▶ 2 Videos
- ☰ 1 Article
- ✍️ 1 Activity
- ☑️ 1 Quiz

# Your Moonshot Mindset & Culture

🕒 12 LESSONS | 2 HOURS 40 MINUTES

Unlearn traditional thinking patterns to unlock a mindset that fuels bold innovation. You'll learn how to embrace uncertainty, celebrate failure, and build resilience.

## Learning Outcomes

- Define the traits of Moonshot thinkers.
- Practice mindset-shifting techniques to increase resilience, comfort with ambiguity, and openness to failure within your team and yourself.
- Identify cultural signals and creative tensions that impact innovation, and propose one shift to strengthen creative safety.

## Key Activities

- **Self-assessment:** Evaluate your current thought patterns and organizational culture to spot gaps and opportunities for greater impact.
- **Sandbox-creation activity:** Sketch a hypothetical protected space in your world where bold innovation could flourish.

## Resources Included

- ▶ 2 Videos
- ☰ 4 Articles
- ✍ 4 Activities
- ☑ 2 Quizzes

# 10X Storytelling

🕒 4 LESSONS | 1 HOUR 25 MINUTES

**Craft a captivating narrative for your innovation idea, tailored to different audiences and stakeholders, to build belief and inspire action.**

## Learning Outcomes

- **Identify** the essential pieces of a Moonshot narrative.
- **Draft** a compelling, credible Moonshot story that connects your idea to business value, urgency, and human impact.
- **Tailor** your message for diverse audiences — from skeptics to executives — to inspire belief and gain buy-in.

## Key Activities

- **Story remix exercise:** Practice creating different versions of your Moonshot story for a range of hypothetical audiences and stakeholders.
- **Moonshot story:** Write a captivating and inspiring narrative for your idea.

## Resources Included

- ▶ 1 Video
- ≡ 2 Articles
- ✍ 1 Activity

# Rallying Support

🕒 6 LESSONS | 1 HOUR 35 MINUTES

**Build the coalition your Moonshot needs to grow. You'll identify the allies, challengers, and decision-makers who can help you move faster and smarter.**

## Learning Outcomes

- **Understand** how to identify the right allies, partners, and decision-makers who could support, challenge, and accelerate your Moonshot.
- **Apply** strategies for building trust, engaging skeptics, and keeping coalitions aligned through change and uncertainty.
- **Explore** various roles, contributors, and conditions for internal and external partners.

## Key Activities

- **Partner-mapping exercise:** Plot out potential internal and external coalition members for your Moonshot.
- **Moonshot coalition exercise:** Draft a high-level plan that outlines key roles and opportunities for collaboration.

## Resources Included

- ▶ 2 Videos
- ☰ 2 Articles
- ✍️ 2 Activities

# Pressure Testing Ideas

🕒 8 LESSONS | 2 HOURS 30 MINUTES

Explore X's approach to pressure testing ideas, which means testing often, fast, and with clear purpose. You'll set kill criteria and identify your "Monkey," the riskiest problem you need to face first.

## Learning Outcomes

- **Explain** why fast, focused experiments accelerate learning and reduce innovation risk.
- **Identify** your "Monkey" and the other key criteria to start experimenting with purpose.
- **Practice** techniques to pressure test ideas, uncover blind spots, and capture lessons that can inform future projects.

## Key Activities

- **Pressure test:** Try running pre-mortems and red teaming exercises.
- **Experiment setup exercise:** Identify your Monkey.

## Resources Included

- ▶ 2 Videos
- ≡ 2 Articles
- ✍ 4 Activities

# Fast & Scrappy Prototyping

🕒 8 LESSONS | 2 HOURS 35 MINUTES

Prototype like The Moonshot Factory's Design Kitchen to quickly unlock unexpected insights and sharpen focus. You'll also explore AI as a tool for validating and testing your ideas at an accelerated speed and scale.

## Learning Outcomes

- **Apply** The Moonshot Factory's criteria to design effective prototypes.
- **Build** quick, low-fidelity prototypes using available materials.
- **Explore** how AI tools can help you simulate, visualize, or refine early-stage concepts.

## Key Activities

- **V0.crap design:** Draft a quick and scrappy early prototype plan.
- **AI integration plan:** Draft a prototyping plan for your capstone that incorporates the use of AI-powered tools.

## Resources Included

- ▶ 2 Videos
- ☰ 3 Articles
- ✍️ 3 Activities

# Your Audacious Challenge

🕒 3 LESSONS | 1 HOUR 10 MINUTES

Draft a plan for an impossible-sounding, high-stakes challenge that pressure tests your riskiest ideas and fuels learning, momentum, and morale.

## Learning Outcomes

- **Explain** what an Audacious Challenge is and how X uses them to accelerate innovation and insight.
- **Set** clear learning goals and metrics for your challenge to focus energy and maximize impact.
- **Understand** how to take challenge learnings forward to supercharge progress.

## Key Activities

- **Bold experiment breakdown:** Analyze the pieces of an audacious challenge and how it's different from setting traditional milestones.
- **Audacious challenge plan:** Draft a challenge of your own to try for your Moonshot.

## Resources Included

- ▶ 1 Video
- ☰ 1 Article
- ✍️ 1 Activity

# Capstone Project: Launch Your Moonshot

🕒 6 LESSONS | 1 HOUR 45 MINUTES

Finish the course by incorporating everything you've learned into your Moonshot Launch Plan — a document proving you can pitch, test, and scale bold ideas.

## Learning Outcomes

- **Finalize** and submit a complete Moonshot Launch Plan that demonstrates your 10X thinking and innovation skills.
- **Apply** course knowledge, skills, and frameworks to create a practical guide for leading future Moonshots and advancing your career.
- **Pass** the final assessment to earn your MasterClass Certificate.

## Key Activities

- **Capstone creation:** Refine and submit your Moonshot Launch Plan.
- **Final assessment:** Take and pass the final quiz to unlock your certificate.

## Resources Included

- ▶ 1 Video
- ☰ 3 Articles
- ✍ 1 Activity
- ☑ 1 Quiz

# Frequently Asked Questions

## **What are MasterClass certificates?**

MasterClass certificates are online programs co-created with industry experts and top institutions, designed to build real-world skills and award a shareable certificate upon completion.

## **Who are these certificates for?**

They're for professionals who want to advance their careers, pivot into new roles, or gain in-demand technical, creative, or business skills.

## **What's included in a certificate program?**

15–20 hours of immersive learning through expert-led video lessons, interactive quizzes, practical exercises, and a capstone project.

## **How long does it take to complete?**

Most learners finish in 4–6 weeks, but you can learn at your own pace and have up to one year after purchase to complete it.

## **Are certificates included in my MasterClass membership?**

No, certificates are a separate product. However, MasterClass members can preview the first 1 or 2 modules for free.

## **Can I share my certificate?**

Yes! You can showcase your certificate on LinkedIn, your résumé, or other professional platforms.

## **Is financial assistance available?**

Not yet, but we are exploring options to expand accessibility.

## **Are certificates available in the MasterClass app?**

Currently, certificates are only available via the MasterClass website. App support is planned for the future.

## **What if I need help or have another question?**

Reach out to us at [support@masterclass.com](mailto:support@masterclass.com).





# Get This Certificate

- ✓ 30-day money-back satisfaction guarantee.
- ✓ Access to all videos, reading materials, case studies, assignments, and quizzes.
- ✓ Earn a MasterClass Certificate upon completion to enhance your résumé and LinkedIn profile.

[Sign Up Now →](#)