University of Cyprus

COGENCY AI-COSCIENTIST

"Cogency AI" is the name of our company, and "AI Co-Scientist" is the name of our product, positioned as a competitor to Google's AI Co-Scientist.

The name Cogency was chosen because it denotes logical reasoning. Additionally, it can be interpreted as a combination of "Co"—symbolizing cooperation between humans and AI—and "Agency", reflecting agentic AI.

We are building an Agentic Reasoning Cooperative AI Scientist.

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Cogency AI - Revolutionizing Scientific Research

Cogency AI Co-Scientist

(Name combines "Co"-operation + "Agency", while cogency means logical reasoning)

Our Vision: Revolutionize scientific research with a self-improving AI scientist evolving through adaptive, multi-agent reasoning and continuous learning from real-world outcomes.

The Problem We Address: Current research workflows are often manual, fragmented, time-consuming (based on "As Is" analysis), error-prone, and lack integrated, adaptive learning capabilities.

Our Solution: The AI Co-Scientist

- **Modular Framework:** Specialized AI agents (Idea Gen, Hypothesis, Experiment, Code Exec, Benchmarking, Review).
- **Orchestration:** Top-level Manager Agent uses meta-reasoning.
- **Unique Core:** Learns and *improves* strategies based on **real research results** via reinforcement learning – differentiating from competitors' rigid pipelines (e.g., Google) by adapting over time.
- **Human-in-the-Loop:** Integrates human expertise and oversight, allowing researchers control.

Target User (Persona): Tech-savvy, efficiency-focused researchers like "Chrysis Andreou" (AI Master's Student) aiming for academic excellence and innovation.

Market Opportunity & Unique Value

Significant Market Opportunity & Validation

- **Beachhead Market:** Early adopter academic/industry researchers using advanced AI tools (~600,000 users).
- **Total Addressable Market (TAM):** Estimated at €150M - €600M annually for the beachhead (Blended Bottom-up/Top-down suggests ~€437.5M).
- **High Growth Potential:** Positioned in a rapidly expanding market (Est. 30% CAGR).
- **Early Validation:** Confirmed strong interest from Next 10 Potential Customers across diverse global research fields (RL, Bioinfo, CV, Robotics, NLP, etc.) and roles (PhD, Postdoc, Prof, Industry). Our value proposition resonates with key decision-makers (End Users, Champions, Economic Buyers).

Our Competitive Edge & Value

- **Core Advantage: Self-Improving AI via Continuous Learning from Real Research Outcomes.** This unique core allows adaptation and optimization based on actual scientific success/failure, unlike competitors (e.g., Google, Sakana, OpenAI DeepResearch).
- **Quantified Value Proposition:** **Accelerate research cycles by ~50%** (e.g., reducing tasks from 50 to 25 hours) while simultaneously enhancing research quality and enabling breakthrough innovation.
- **Competitive Position:** Occupies the "upper-right quadrant" - delivering superior value on both Research Acceleration/Efficiency AND Enhanced Research Quality/Innovation. Our Core directly fuels this Value Proposition and establishes our leading Competitive Position.

Next 10 Customers (Step #9)

Sourcing: Identified 10 high-potential end users through diverse channels including relevant publications (NeurIPS), conference speakers (AI Ethics), university/lab directories (MIT, UTokyo, ETH, Stanford, MPI), industry events (Biotech), and corporate research sites (TechCorp). (33% yield rate from initial outreach).

Fit Validation: **Confirmed High Overall Fit for all 10 prospects against key criteria:**

- **End User Profile (Step 3):** Match demographic (Researcher roles) & psychographic (Early adopter, efficiency-driven, rigor-focused) attributes.
- **Use Case (Step 6) & Product Spec (Step 7):** Strong resonance with pain points and proposed agent-based solution for tasks like parameter tuning, hypothesis generation, benchmarking, literature synthesis.
- **Value Proposition (Step 8):** Quantified benefits (e.g., time savings, accelerated discovery) highly compelling and aligned with user priorities.

Engagement & Interest: All 10 prospects were contacted directly. Conversations revealed High Interest across the board, validating core assumptions and product direction.

Sales Process Indication: Consistent high fit and positive engagement suggest the defined target profile is accurate and the sourcing/engagement methods form a repeatable process for acquiring initial customers within the beachhead market.

Lesson Learned from PMR in Identifying Next 10 Customers (Step #9 continued)

Learning & Iteration: Successfully identified 10 high-interest potential customers across diverse global AI/ML fields (33% yield from 30 contacts) using targeted outreach (publications, directories, conferences). This validated our customer profile fit with minimal need for iteration on core definitions.

Hypothesis Validation: Validated core hypotheses regarding the Beachhead Market's existence/reachability, the resonance of the End User Profile/Persona, the relevance of the Full Life Cycle Use Case addressing key pain points, the appeal of the High-Level Product Specification, and the compelling nature of the Quantified Value Propositions. No major hypotheses were invalidated.

New Hypotheses/Requirements: User feedback highlighted critical adoption requirements, suggesting new hypotheses around the importance of: seamless integration with existing tools (ROS, HPC, MLOps, etc.), robust validation/proof points (case studies, benchmarks), enterprise needs (scalability, security), clear pricing/ROI, and customization capabilities.

Strategic Changes: Confirmed no fundamental changes are needed at this stage for the defined Persona, Beachhead Market, or core Use Case.

Confidence: Significantly increased confidence in defining "who our customer is" (diverse academic/industry AI researchers needing efficiency/automation) and "what we can do for them" (accelerate research via AI-assisted workflows). Next steps involve deeper validation of specific technical requirements and converting interest to commitment.

Define Your Assets, Moats and Core (Step #10)

Value Proposition: Accelerate research by 50% (to 25 hrs) via an integrated, automated AI workflow with self-improving multi-agent reasoning, enhancing quality & enabling faster breakthroughs.

Top Assets:

1. **Unique AI Architecture:** Self-improving, adaptive multi-agent system learning from real outcomes.
2. **Deep AI/ML Expertise:** Specific knowledge in agentic systems, meta-reasoning, RL for science.
3. **Continuous Learning Capability:** Inherent system design to improve persistently.
4. **Niche Focus:** Deep understanding of academic research needs & workflow.
5. **Modular Framework:** Flexible, integrable, allows Human-in-the-Loop.

Strongest Proposed Moats:

1. **Self-Improving System (Continuous Learning):** Compounding advantage via use/data; hard to replicate.
2. **Proprietary Architecture & Algorithms:** Technical barrier, potential IP.
3. **Network Effects (Data & Learning):** More usage -> better AI -> stickiness.
4. **Switching Costs:** Deep workflow integration creates user inertia.

Potential Cores:

1. Self-Improving AI via Continuous Learning from Real Research Outcomes
2. Adaptive Multi-Agent Reasoning Architecture
3. Human-Guided Autonomous Research Capability

Define Your Assets, Moats and Core (Step #10)

Our Chosen Core:

Self-Improving AI via Continuous Learning from Real Research Outcomes

Why It's Unique?

Learns persistently and adaptively from the outcomes of diverse, real-world scientific research – unlike static pipelines or systems learning only in simulation.

Why It Matters to Customers (Value Proposition Link)?

Directly drives the value prop: An AI that constantly gets better at research delivers accelerating time savings (50% goal) and higher quality breakthroughs over time. Aligns with researcher goals (excellence, innovation).

How It Creates Sustainable Advantage?

- Grows via a proprietary data network effect specific to research outcomes.
- Accumulates intelligence competitors can't replicate quickly; they lack the historical, outcome-linked learning data. This performance gap widens.

Why This Core Over Alternatives (e.g., Architecture)?

- The Architecture is a key enabler (asset/moat).
- The Self-Improvement is the dynamic, compounding value engine and the sustainable advantage. It represents the growing intelligence, which is harder to copy than the structure itself.

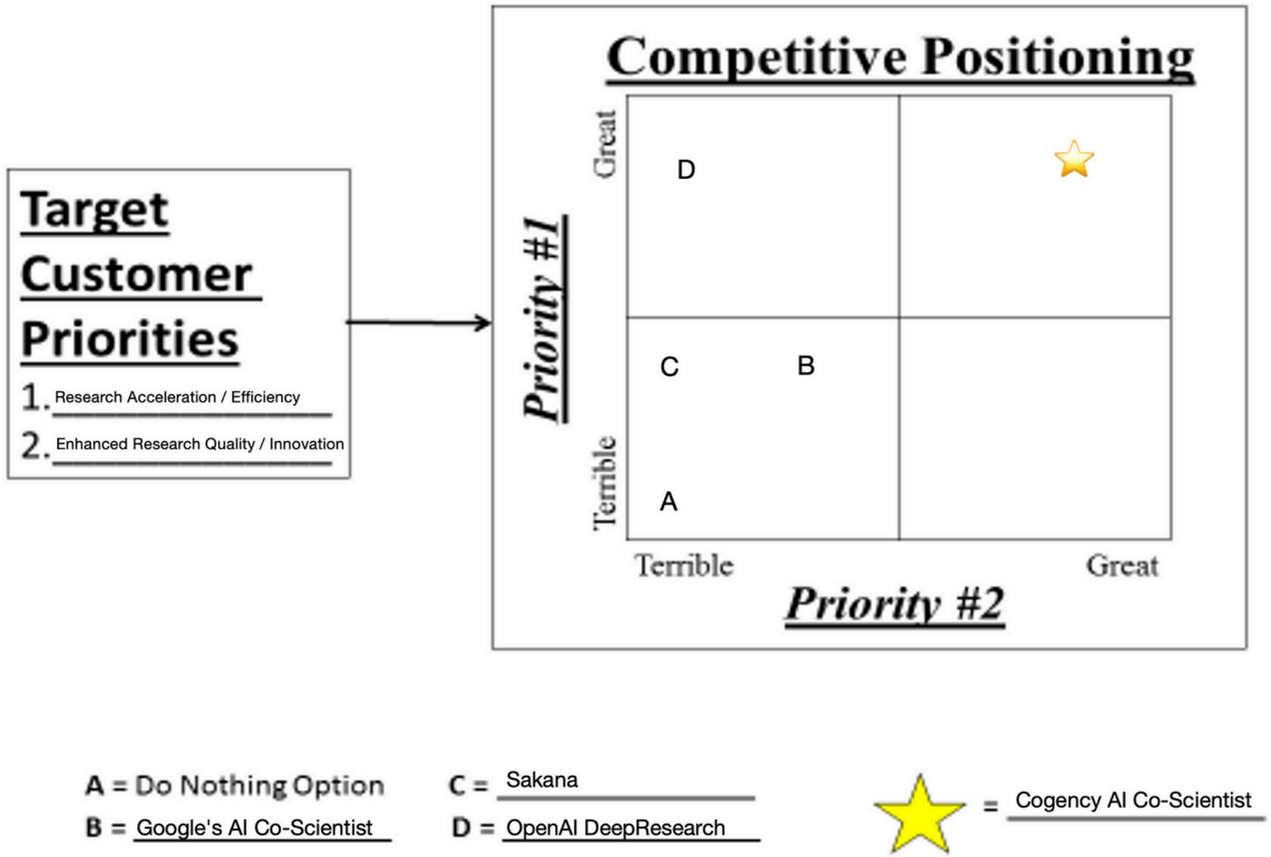
Our Competitive Edge: Adaptive Intelligence (Step #11)

Our Core Advantage: Self-Improving AI

- **Enhanced Quality/Innovation:** Learns winning research strategies for better, novel outcomes.
- **Research Acceleration:** Optimizes processes, avoids failures for faster, impactful results.

Why Competitors Fall Short?

- **Do Nothing (A):** No acceleration or quality improvement.
- **Google/Sakana (B/C): Limited adaptability** due to fixed designs, hindering deep quality gains.
- **OpenAI (D):** Strong on speed, but potentially **lacks our research-specific, comprehensive learning for nuanced quality.**



Determining the Customer’s DMU (Step #12)

Goal: Identify how buying decisions are made in an academic setting for Cogency AI Co-Scientist.

End User – Chrysis Andreou (Grad Student)

- Motivation: Research acceleration, innovation, personal project (AI-CoScientist)
- Influencers: Professors, peers, open-source community
- Needs: Efficiency, learning tools, publication support

Economic Buyer – Dr. Alexios Papadopoulos (PI / Lab Head)

- Motivation: Lab output, ROI, funding success
- Influencers: Admin, finance, funding agencies
- Power: Controls budget, demands compliance/security

Champion – Dr. Eleni Costa (Postdoc / Assistant Prof.)

- Motivation: Career growth, lab innovation, mentorship
- Influencers: End users, peer labs, vendors
- Role: Bridges end user needs and buyer approval—key to internal advocacy

Takeaway: Success hinges on aligning product value with research goals, budget efficiency, and career advancement, while navigating institutional processes

Mapping Customer Acquisition - The Journey (Step #13)

How We Turn Research Pains into Paying Customers

Stage	Customer Action	Our Focus
Need	Recognizes research friction, seeks solutions.	Targeted content highlighting their pain.
Explore	Searches online, asks peers for options.	Strong online presence, engaging relevant communities.
Evaluate	Compares options (including "Do Nothing"), requests info/demo.	Clear value proposition, competitive differentiation, compelling demos.
Acquire	Decides to adopt, navigates procurement, signs up/requests quote.	Streamlined process, procurement support, nurture DMU.
Pay	Submits payment (personal) or ensures institutional invoice is paid	Easy payment options, clear invoicing.
Setup	Installs/sets up account/API access.	Clear documentation, responsive support.
Value	Uses platform, experiences benefits in research.	Effective onboarding, demonstrate QVP quickly.
Assess	Determines value vs. cost, considers renewal.	Provide usage reports, gather feedback, proactive communication.
Expand	Renews, adds users, upgrades plan.	Smooth renewal process, scaling options.
Advocate	Shares positive experiences, recommends to others.	Encourage reviews, showcase success stories.

Sales Cycle Length - Estimating the Timeline (Step #13)

From Awareness to Customer

Funnel Stage	Customer Journey Equivalent	Estimated Time
Identification	Lead Generation	1-4 Weeks
Consideration	Need & Explore	2-4 Weeks
Engagement	Evaluate	1-4 Weeks
Purchase Intent	Evaluate	1-4 Weeks
Purchase	Acquire & Pay	2-10 Weeks
Total Sales Cycle		6 - 22 Weeks

Note: Institutional procurement significantly impacts the Purchase phase and overall timeline.

First Draft Sales Funnel - Guiding Prospects (Step #13)

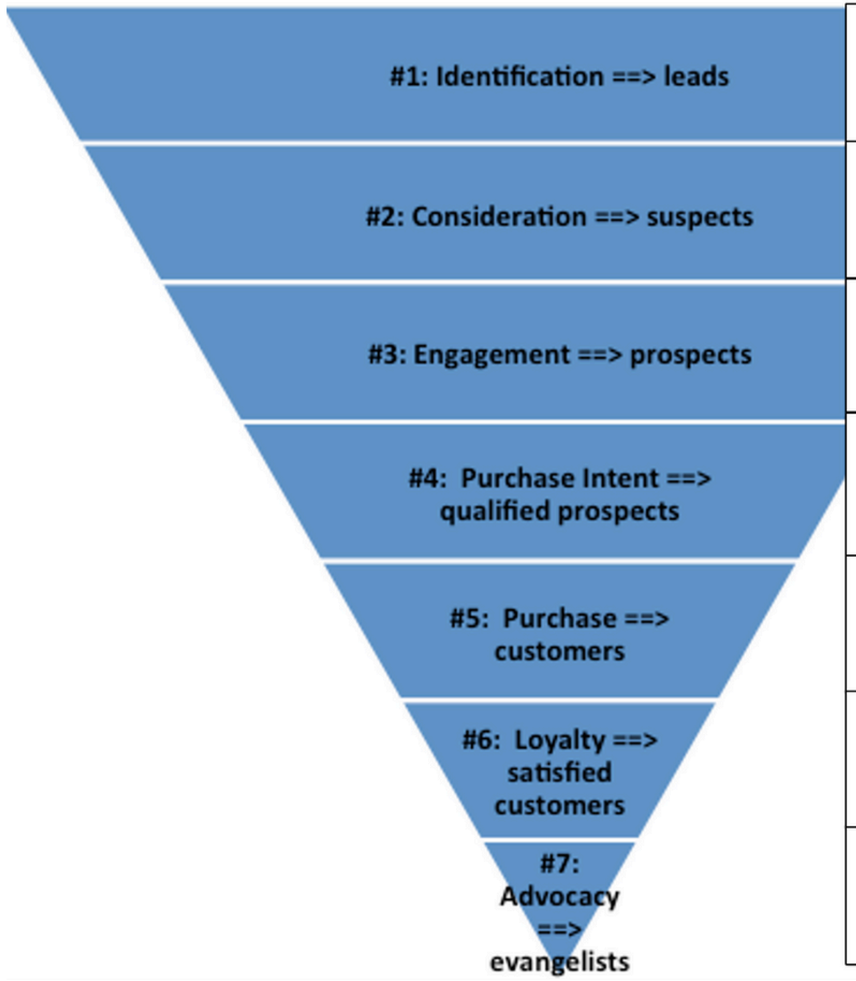
Our Path to Building a Loyal Customer Base

Qualitative Summary:

We guide researchers from recognizing a need to becoming advocates by demonstrating clear value and navigating institutional processes effectively.

Focus Areas:

Monitor and refine the longer institutional procurement and value demonstration stages.



Action Plan for Identification: Actively source leads through targeted outreach based on academic publications, conference attendance, and relevant research labs
Action Plan for Consideration: Generate awareness by publishing content addressing researcher pain points and ensuring visibility in key academic watering holes
Action Plan for Engagement: Engage prospects with compelling demos and trials showcasing clear value differentiation against alternatives.
Action Plan for Purchase Intent: Nurture qualified prospects by providing case studies, addressing technical concerns, and supporting internal evaluation processes
Action Plan for Purchase: Facilitate acquisition by streamlining signup/quoting and actively supporting prospects through institutional procurement hurdles.
Action Plan for Loyalty: Ensure customer success through strong onboarding, proactive support, and consistently demonstrating achieved value aligning with the QVP.
Action Plan for Advocacy: Encourage satisfied users to share positive experiences by requesting testimonials, promoting user success stories, and implementing referral programs.

Windows of Opportunity & Triggers (Step #13)

Capitalizing on Key Moments in the Customer Journey

Based on the "Process to Acquire a Paying Customer," we will focus on the "Analyze Options" (Stage 3) window of opportunity.

Trigger We Will Design:

Proactive Engagement During Conference Attendance

- **Window of Opportunity:** Researchers actively exploring solutions and comparing options at relevant academic conferences (a key "Watering Hole").
- **Trigger Design:**
  - **Pre-Conference Outreach:** Identify target attendees (based on publications, research areas aligning with our value prop) and invite them to schedule personalized demos at our booth.
  - **Conference Presence:** Showcase compelling demos highlighting our competitive advantages (adaptive AI, focus on quality & speed). Offer exclusive conference trial access.
  - **Post-Conference Follow-up:** Immediately follow up with demo attendees with tailored information and support to facilitate their evaluation process.

Rationale: Conferences provide a concentrated audience actively seeking solutions. A proactive, personalized approach with a clear trigger can effectively intercept researchers during their critical "Analyze Options" stage, increasing our chances of conversion.