OUTLINE

CRI: Incubating startups at the national labs

▪ The energy startup challenge
▪ CRI and how we help
OUTLINE

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- The energy startup challenge
- CRI and how we help
Climate change will warm the planet to 1.5 °C in 12 years

1.1 billion lack access to electricity today

The global middle class will grow by 2B by 2030

CLEAN ENERGY INNOVATION IS CRITICAL.
CLEAN ENERGY INNOVATION IS DIFFICULT.

- Long development times and higher costs make it riskier
- Energy regulation and low costs are additional barriers
Clean energy innovation requires patient capital
VC funding of clean energy innovations has decreased
Most VC funding goes towards a few known tech areas
OUTLINE

CRI: Incubating startups at the national labs

- The energy startup challenge
- CRI and how we help
CRI IS ON A MISSION
To help entrepreneurs with transformative energy and sustainable manufacturing tech build businesses that solve some of the nation’s most complex energy challenges.
WHAT IS CHAIN REACTION INNOVATIONS?
Argonne’s effort to help energy startups to de-risk and mature their tech 10x more efficiently than elsewhere

- A 2 year program that embeds innovators within established programs at ANL
- $750K all-in support
  - ($220K CRADA, 2 years salary, benefits, travel, and support from the CRI team)
- Mentorship and support:
  - technical, business development, and manufacturing

CRI is supported by DOE EERE AMO
WHY WE’RE DOING IT

Incubate companies (and the innovators driving them) in the labs?

- National Labs have tremendous resources (equipment, infrastructure, knowhow, people)
- National Labs are NOT universities - they’re unique
  - Primary mission is to have a long term focus on science and technology needs of the nation
  - Groups of scientists working together on the Big Picture
  - But: Conflict of interest is a big challenge for those that want to take an active role in commercialization of their technologies

- Our goal: **spin-IN startups that leverage the labs**
  - People and tech from outside embed in the lab, doing technical work for a few years that enables product innovation informed by the market.
HOW CRI WORKS

Through technical and business mentorship in partnership with the Chicago innovation network, CRI provides entrepreneurship training.

Identify best innovators → Seed money, technical and business mentorship → Launch into market

Cohort 3
HOW CRI WORKS

Through technical and business mentorship in partnership with the Chicago innovation network, CRI provides entrepreneurship training

CRI comes with:

- Dedicated lab and office space @ ANL
- ANL assistance in conducting R&D
- Fellowship funding for 2 years (salary, benefits, and travel)
- Funding for technical work at Argonne
- Advisory network of business mentors
- Connections to commercial partners and investors

HOW CRI WORKS

1. Identify best innovators
2. Seed money, technical and business mentorship
3. Launch into market
HOW CRI WORKS

Through technical and business mentorship in partnership with the Chicago innovation network, CRI provides entrepreneurship training.

Identify best innovators  Seed money, technical and business mentorship  Launch into market

After 2 years, teams graduate as investment-ready companies.
CRI 2-YEAR IMMERSION TIMELINE (COHORT 2)
The ideal timeline – setting expectations, velocity

June 4, 2018

2018

On-boarding

Pre-boarding

Core Programming

Proposal Writing

2019

Embedded & Active

Key Technical Work

Initial Small Proposals Funded

1 year review

Private Fund-raising

2020

DEMO DAY

Primary Technical Milestones Achieved

New Technical Work

Bigger Proposals Funded

Close Angel Series-A Funding Round

June 2020

The ideal timeline – setting expectations, velocity
ARGONNE: A DOE lab with $750M budget and diverse expertise

- Synchrotron x-ray source
- Protein facility
- Materials and energy sciences
- Nanoscience
- Chemical engineering
- Biology
- Transportation R&D
- Chemistry
- High-energy and accelerator physics
- High performance computing & data
- Chemical engineering
WORKING IN CHICAGO

Chicago is home to a vibrant innovation ecosystem

CHICAGO INNOVATION ECOSYSTEM MAP

Chain Reaction Innovations (CRI) is Chicago’s leader in capital-intensive clean tech development, and has strong connections to complementary organizations in the region’s innovation ecosystem.

Chain Reaction Innovations | https://chainreaction.snl.gov/
CRI TEAM
Experience in entrepreneurship, technology R&D, policy – your new best friends

John Carlisle, Director
• Provides vision and leadership for CRI

Adria Wilson, Entrepreneurial Program Lead
• Works with innovators on a day-to-day basis and within the regional innovation ecosystem

Wenora Johnson, Administrative Support
• Supports the CRI Team and Innovators including travel, scheduling, events.

John Aikens, Collaborations Lead
• Responsible for developing external business partnerships and collaborations on behalf of CRI

Deena Wright, Operations Lead
• Coordinates all operational aspects of CRI

Additional Support
Peter Slawniak (IP, Legal)
Katherine Taylor, Budget Support
Kathy Hays, Communications (Contractor)
Roland Garton, Proposal Writing (Contractor)
Anna Lisa Somera, Proposal Writing (Contractor)
CRI COHORT 1
Embedded 2017 - 2019

Ian Hamilton

Tyler Huggins & Justin Whiteley

Bernard Johnson & Julie Blumreiter

Felipe Gomez del Campo
CRI COHORT 2
Embedded 2018 - 2020

Accelerate Wind
Erika Boeing

Tom Guarr

Volexion
Ted Seo

Iris
Chad Husko

Veronika Stelmakh

David Manosalvas-Kjono

Applicants' Residence
Applicants' College

Chain Reaction Innovations
Entrepreneurship at Argonne

Argonne National Laboratory

Our mission is to power your mission
COHORT 3

Key dates

• September 12: Application opens

• October 31 at 5 pm CST: Application closes

• November 30: Selected semi-finalists are notified

• January 7-11: Semi-final interviews

• February 4-8: Final interviews

• April 2019: On-boarding of Cohort 3
EVALUATION CRITERIA
Applicants are evaluated iteratively throughout the selection process

- How innovative is the idea?
- Are the applicants qualified?
- Is it commercially viable?
- Does it match Argonne’s capabilities?
APPLICATION ADVICE

Begin thinking about your team and business value

• Identify which Argonne capabilities and experts can help you develop your idea.

• Explain how your idea fits with the goals of the Department of Energy and/or the Office of Advanced Manufacturing.

• Remember that the application is not proprietary. Do not include non-patented invention idea specifics.

• Explain who might buy your product and how it compares to competitive products.

• **CRI strongly encourages** teams of innovators.
ELIGIBILITY

Requirements are driven by ANL and DOE:

Must be represented by one or more technical leads who:

- Possess a minimum of 5 years hard technology R&D experience
- Are first time technical founders
- Are either a U.S. citizen or permanent resident
- Must be focused on an advanced materials or manufacturing related energy technology
- Must have the potential for broad impact that aligns with DOE’s mission to advance the national, economic, and energy security of the United States.
- Individuals, teams, or small businesses may apply
- **Projects that have raised more than $1M in private-sector funding are not eligible to receive cohort support under this program**
FAQ
The questions we hear the most

- Do I need to be a U.S. Citizen to apply?
- How do I apply if I’m part of a team?
- Am I allowed to talk with Argonne scientists while I prepare my application?
- How hard is the $1M cap on private funding?
We cannot solve our problems with the same thinking we used when we created them.

--Albert Einstein

Apply at chainreactions.anl.gov
CHAIN REACTION INNOVATIONS
Entrepreneurship at Argonne
COHORT 3

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SUPPLEMENTAL SLIDES
**STRUCTURED MENTORSHIP**
CRI provides an active mentorship environment targeted to startups

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