



Starting Something That Matters

Big Bang! Workshop
Joe DiNunzio

Big Bang! Sponsors

PLATINUM



GOLD



SILVER

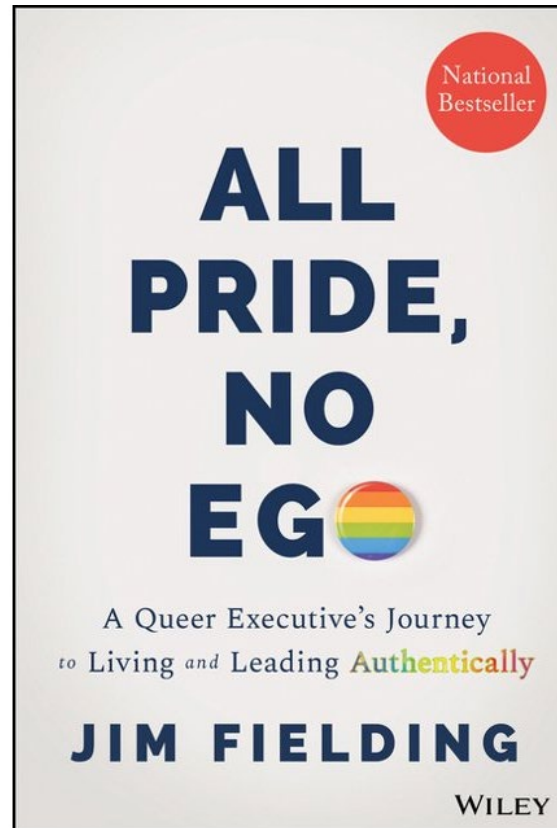


OVERALL



*Pam Marrone &
Mick Rogers*

Think. Do. Discover. Speaker Series



A conversation with author,
advocate, and corporate
leader, **Jim Fielding**

**November 7 | 5-6:30
p.m.**

UC Davis Conference
Center



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#STARTING_SOMETHING_THAT_MATTERS

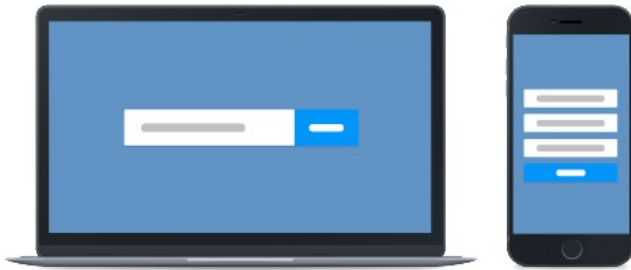


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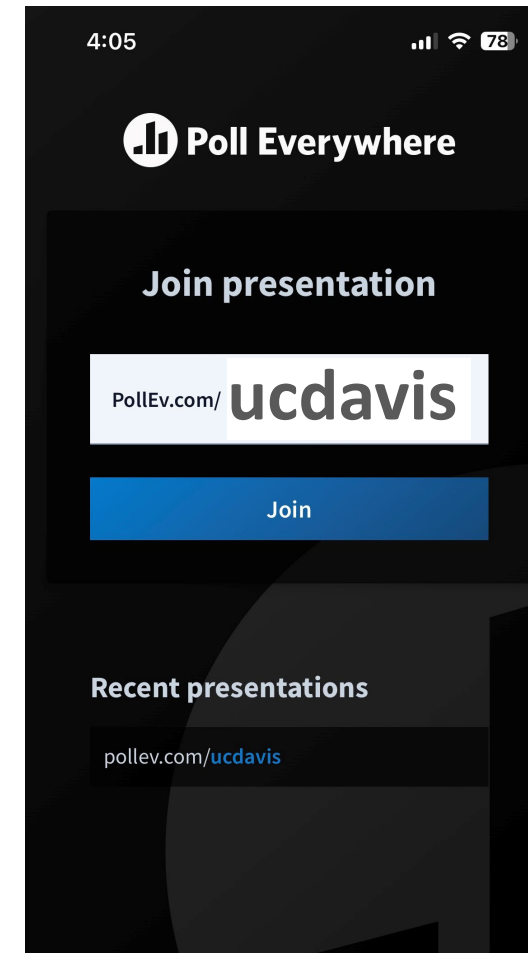
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- 2 Enter **ucdavis**
- 3 Respond to activity

Join by App



What innovation has had the biggest impact on your life?

Nobody has responded yet.
Hang tight! Responses are coming in.

Why would someone want to start a new venture?

Nobody has responded yet.
Hang tight! Responses are coming in.

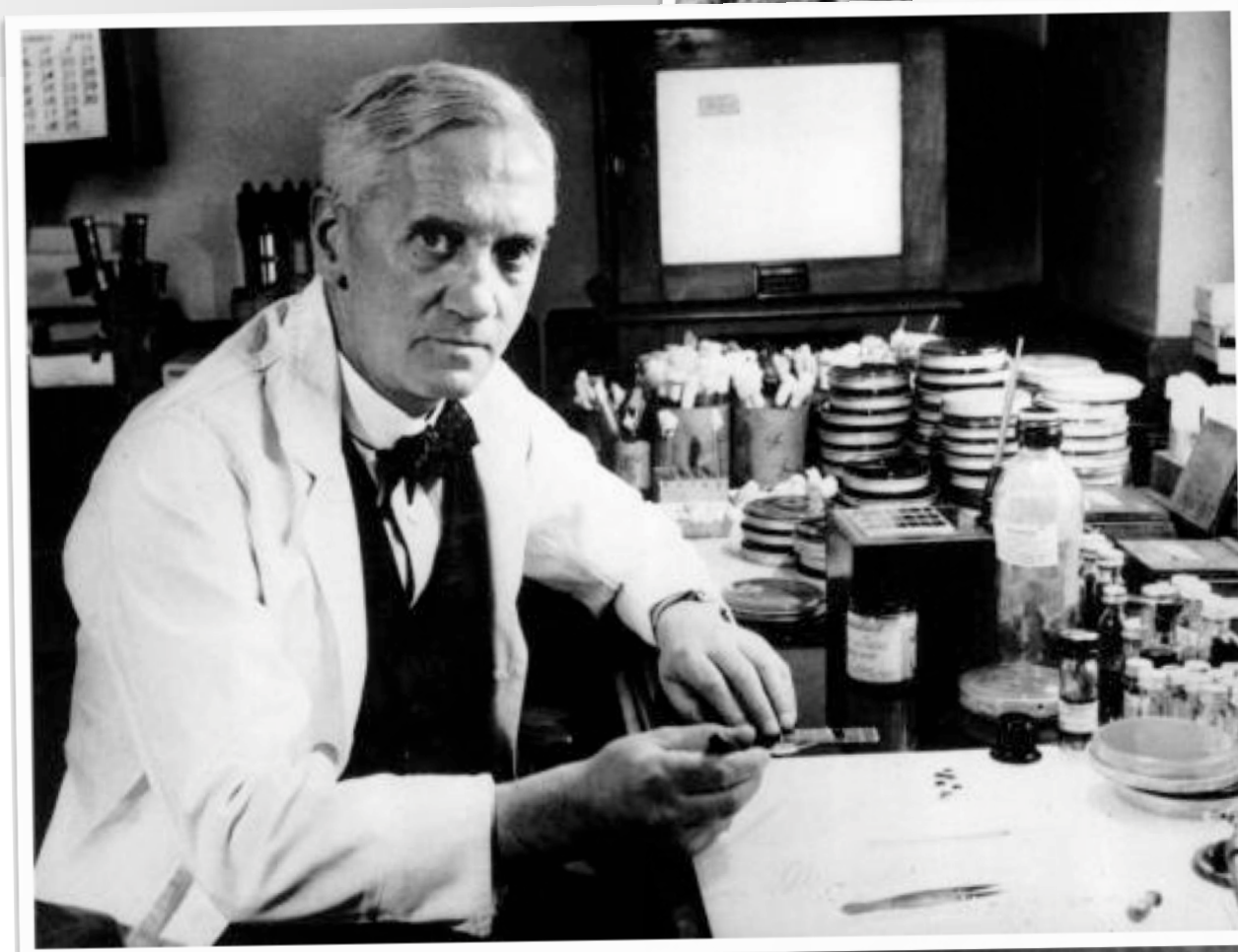
What value (single word) is at the heart of the reason to start a new venture?

Nobody has responded yet.
Hang tight! Responses are coming in.

The best
idea in the
world.



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2000 BC	Chinese remedies include fungi for treatment of infections (similar remedies in India, America, Europe)
1870's	European scientists including Lister, Tyndall, Pasteur, Joubert find penicillin molds inhibit bacterial growth.
1897	French doctoral student Ernest Duschenes discovers <i>Penicillium glaucum</i> kills e. coli bacteria and typhoid bacilli.
1927	Clodomiro Twight, Costa Rican doctor, publishes his use of penicillium on patients with staphylococcus.
1929	Fleming discovers antibacterial properties of <i>Penicillium notatum</i> . Publishes paper. Nothing happens.
1939	Howard Florey and team at Oxford begins investigating therapeutic potential of penicillin.
1941	Oxford's first human trials prove penicillin's value. By year's end, commercial development begins in U.S.



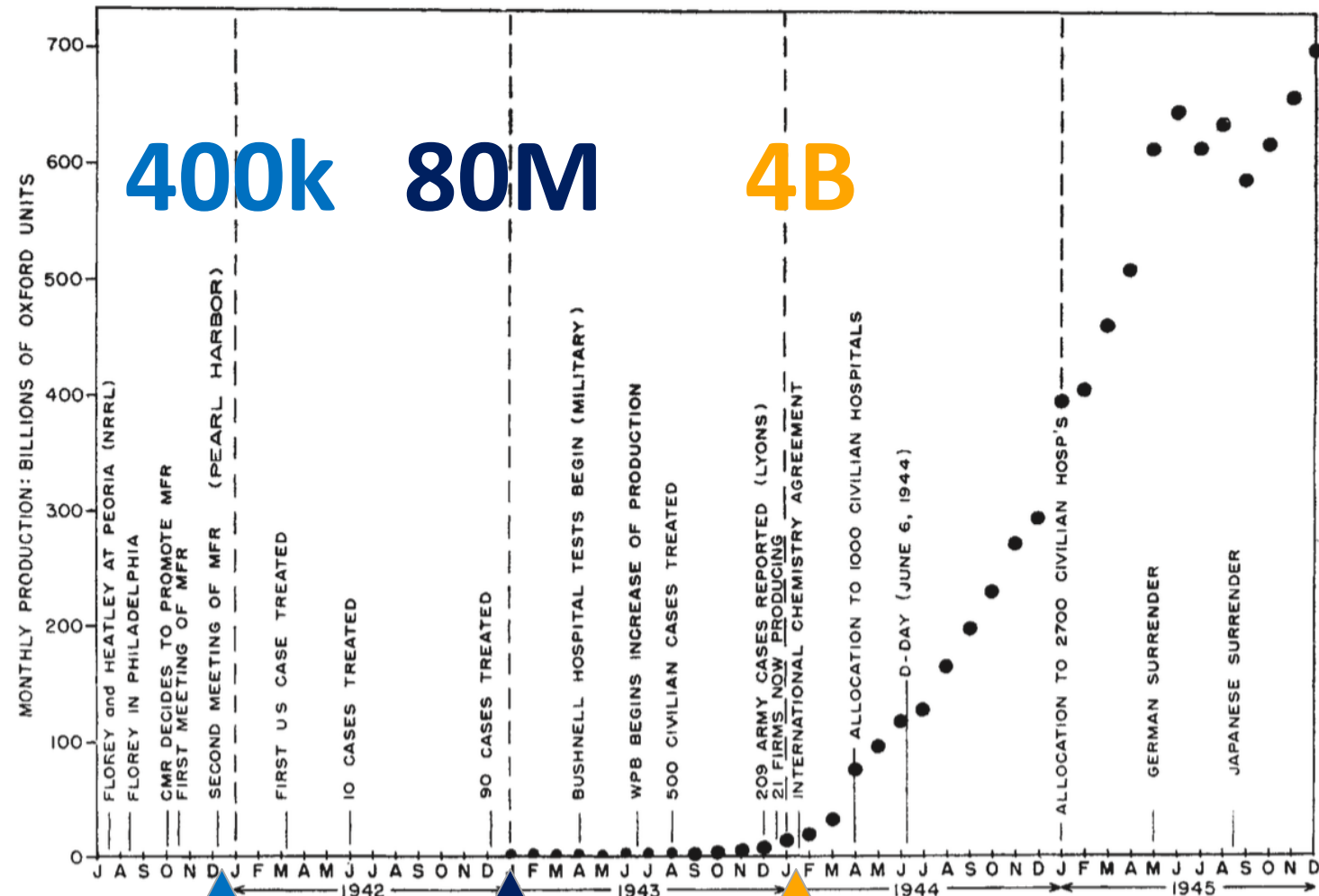


Fig. 1. Penicillin production in the United States. Circles represent monthly production; legends relate these to Florey's visit and to the events which followed.



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***Why did Florey
succeed
when others did not?***



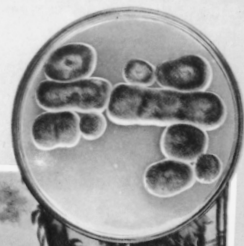

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1

It's not about the idea

Thanks to PENICILLIN
...He Will Come Home!



**FROM ORDINARY
MOLD—
*the Greatest Healing
Agent of this War!***

On the gauzy, green-and-yellow mold above, called *Penicillium notatum* in the laboratory, grows the miraculous substance first discovered by Professor Alexander Fleming in 1928. Named penicillin by its discoverer, it is the most potent weapon ever developed against many of the deadliest infections known to man. Because research on molds was already a part of Schenley enterprise, Schenley Laboratories were well able to meet the problem of large-scale production of penicillin, when the great need for it arose.

When the thunderous battles of this war have subsided to pages of silent print in a history book, the greatest news event of World War II may well be the discovery and development — *not* of some vicious secret weapon that *destroys* — but of a weapon that *saves* lives. That weapon, of course, is penicillin.

Every day, penicillin is performing some unbelievable act of healing on some far battlefield. Thousands of men will return home who otherwise would not have had a chance. Better still, more and more of this precious drug is now available for civilian use... to save the lives of patients of every age.

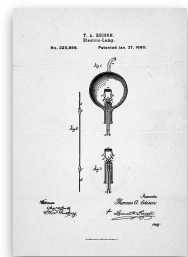
A year ago, production of penicillin was difficult, costly. Today, due to specially-devised methods of mass-production, in use by Schenley Laboratories, Inc. and the 20 other firms designated by the government to make penicillin, it is available in ever-increasing quantity, at progressively lower cost.

Listen to "THE DOCTOR FIGHTS" starring RAYMOND MASSEY. Tuesday evenings, 8-8.5. See your paper for time and station.

SCHENLEY LABORATORIES, INC.
Lawrenceburg, Indiana
Producers of PENICILLIN-Schenley



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2

**The network is
the innovation**

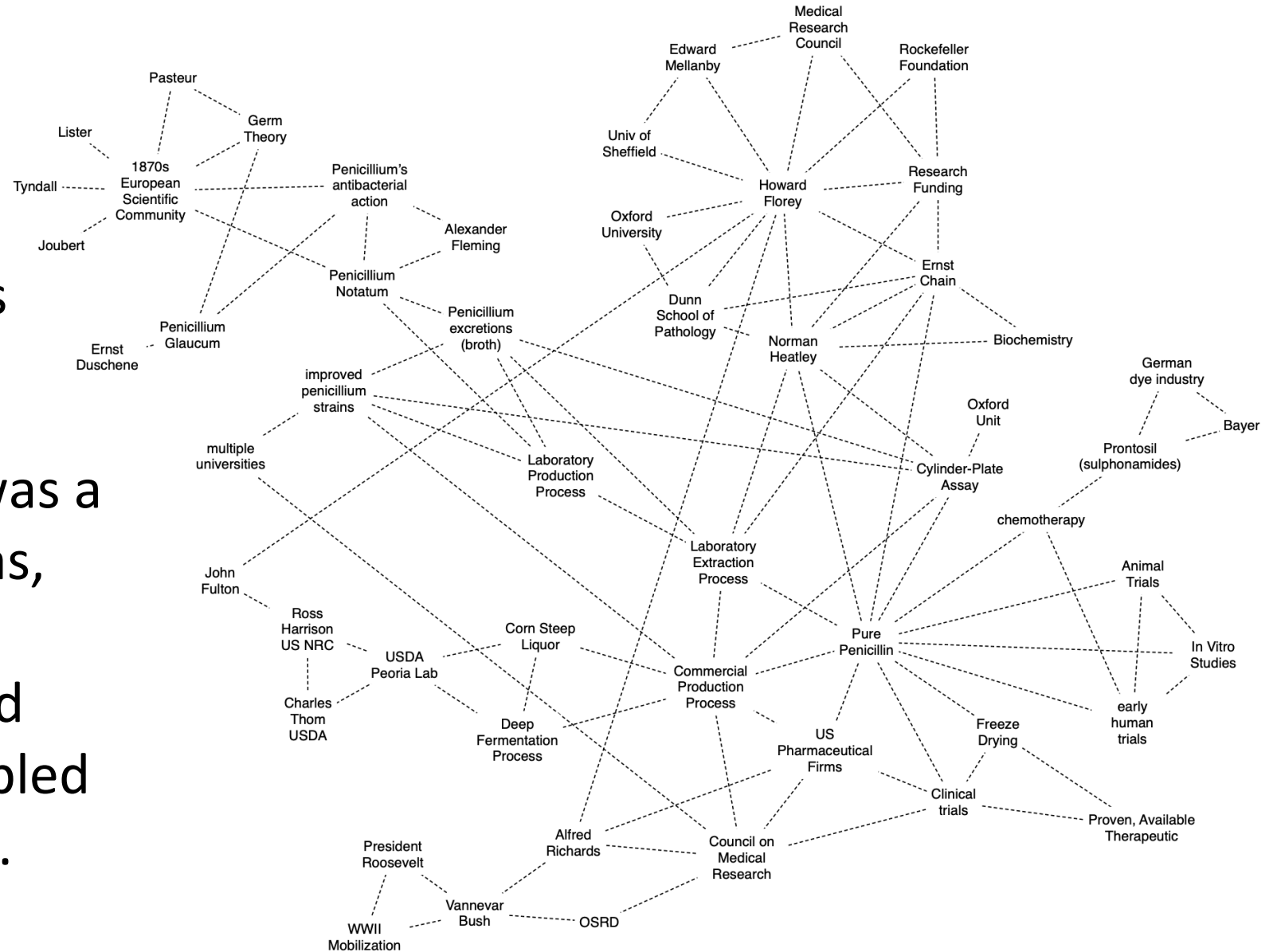


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**The idea of penicillin was
as an antibiotic**

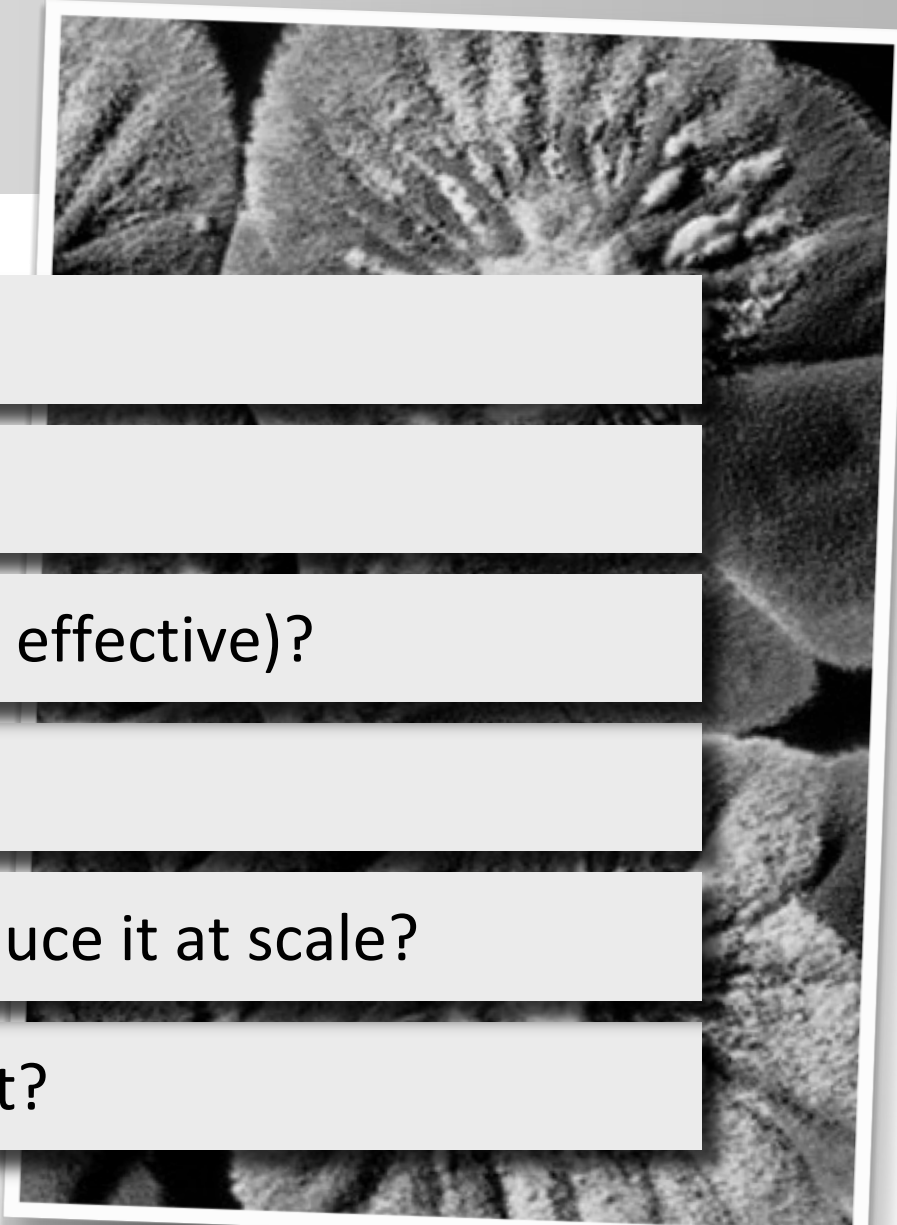
**The reality of penicillin was a
new configuration of ideas,
people, organizations,
technologies, policies, and
other resources that enabled
and constituted penicillin.**



3

**It's about
commitment**





Can we make it?

Is it stable enough to study?

Will it work (is it non-toxic and effective)?

Can we make enough to test?

Can someone (profitably) produce it at scale?

Will someone else synthesize it?

*“[I felt like] a carpet bag
salesman trying
to promote a crazy idea
for some
ulterior motive.”*

— Howard Florey

*I’ve never spent so much
of my time trying
to convince people to do
the right thing
for themselves.”*

— Steve Jobs

But it's worth it.



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#AGGIE_INNOVATORS



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Origin Materials: John Bissell, Ryan Smith



Case Study: Narrative

- Undergraduates John Bissell & Ryan Smith sought to disrupt the PET market with a non-petroleum-based bioplastic.
- Leveraged an undergraduate project, an environmental grant, and faculty relationships to develop initial technology and plan.
- Invested in building their network, acquired key knowledge & capabilities, and followed escalating commitment to go from POC to scale plant.

Origin Materials: John Bissell, Ryan Smith



Case Study: Lessons Learned

- Manage uncertainty and build commitment throughout
- Embrace a Network Growth Mindset to acquire needed / missing capabilities
- Use progressive validation from lab (basic science) to pilot (manufacturability) to plan (pathway to scale)

originmaterials.com

Evolve BioSystems: Samara Freeman, Daniela Barile, Carlito Lebrilla, Bruce German, David Mills

Case Study: Narrative



- Faculty and student researchers discovered relationship between mother's milk / HMO's, the bacterium B. Infantis, and infant health.
- Faced numerous challenges to move from research to an efficacy proof point to a viable business enterprise.
- Driven by vision and mission of wanting to "save babies."

Evolve BioSystems: Samara Freeman, Daniela Barile, Carlito Lebrilla, Bruce German, David Mills

Case Study: Lessons Learned



- Hard things are hard
- Passion and purpose provide inspiration and focus in challenging times
- Moving from research to product to business requires milestone-driven stages with appropriate new personnel / capabilities

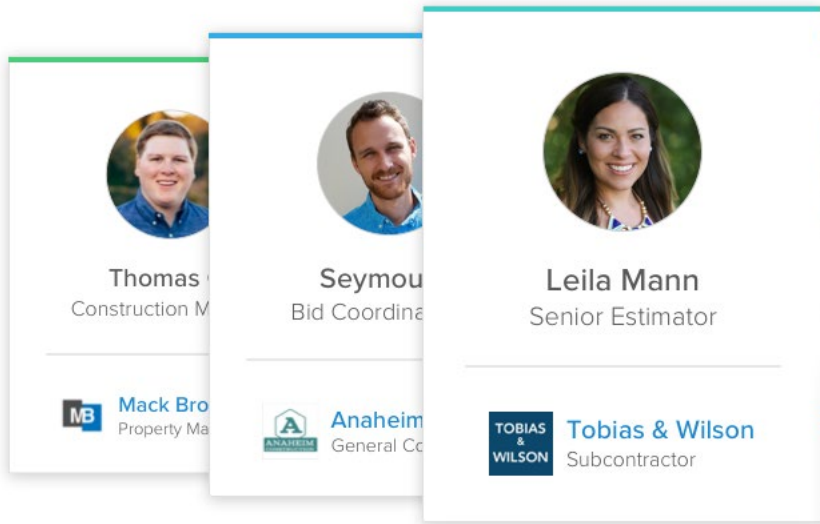
infinanthealth.com

BuildingConnected: Dustin DeVan and Jesse Pedersen

THE NETWORK

The largest construction network at your fingertips.

Access our network of hundreds of thousands of subcontractors and find them based on your specific needs. We keep all their contact information up to date with the latest details to save you time.



Case Study: Narrative

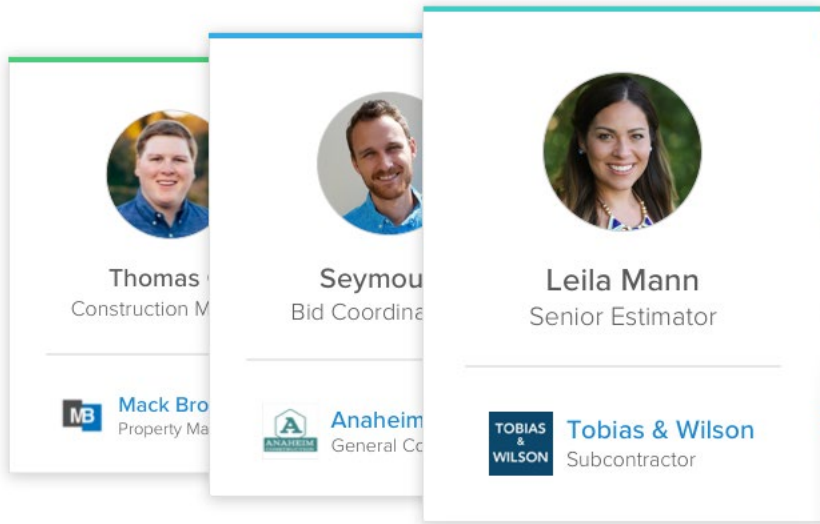
- Undergraduate DeVan leveraged deep industry knowledge to solve a key unmet need in the construction industry.
- Partnered with fellow alum Pedersen to develop and evolve technology, recruit core capabilities, test and evolve product.
- Developed core values and guiding principles to inform key decisions in strategy and personnel.

BuildingConnected: Dustin DeVan and Jesse Pedersen

THE NETWORK

The largest construction network at your fingertips.

Access our network of hundreds of thousands of subcontractors and find them based on your specific needs. We keep all their contact information up to date with the latest details to save you time.



Case Study: Lessons Learned

- Develop a clear vision and path for the company.
- Make market-informed and market-focused decisions.
- Use guiding principles to focus on how best to build the team and serve customers.

Buildingconnected.com

Vite Ramen: Tim Zhang, Tom Zhang



Case Study: Narrative

- Twin undergraduate brothers personally dissatisfied with options in the “nutritional convenience” food space.
- From their apartment kitchen, formulated a healthy instant ramen recipe and decided to produce and market it.
- Used Kickstarter to validate and launch their product, guided by a set of core product and management values.

Vite Ramen: Tim Zhang, Tom Zhang



Case Study: Lessons Learned

- Leverage personal experience and observation to identify an opportunity.
- Progressively build commitment by identifying and testing key assumptions.
- Demonstrate agility in the face of new information / adversity.

viteramen.com

#YOUR_HERO'S_JOURNEY



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What are you planning to start?

Nobody has responded yet.
Hang tight! Responses are coming in.

Why are you pursuing your idea?

Nobody has responded yet.
Hang tight! Responses are coming in.

What (one word) captures your thoughts on moving forward?

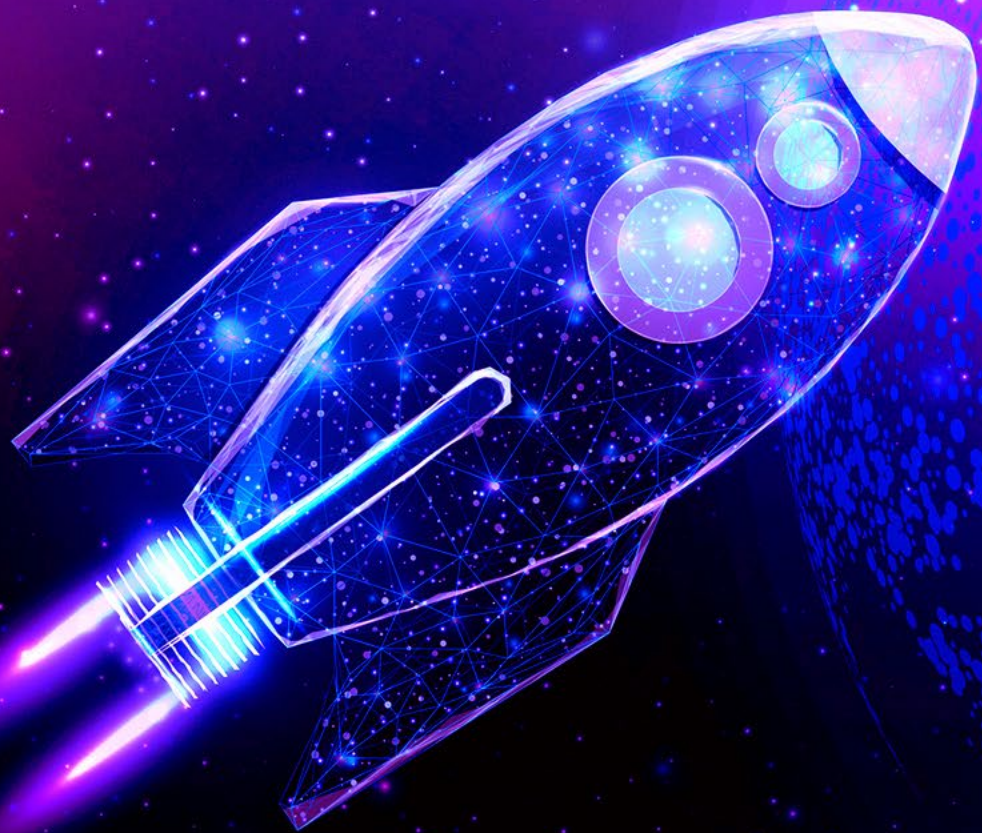
Nobody has responded yet.

Hang tight! Responses are coming in.

Path Forward: Questions

- What are your goal(s)?
- What is your process for moving ahead?
- Whose counsel will you seek?
- What capabilities do you need to build / acquire?
- How will you grow your network?

Time to get started!!!



Questions!

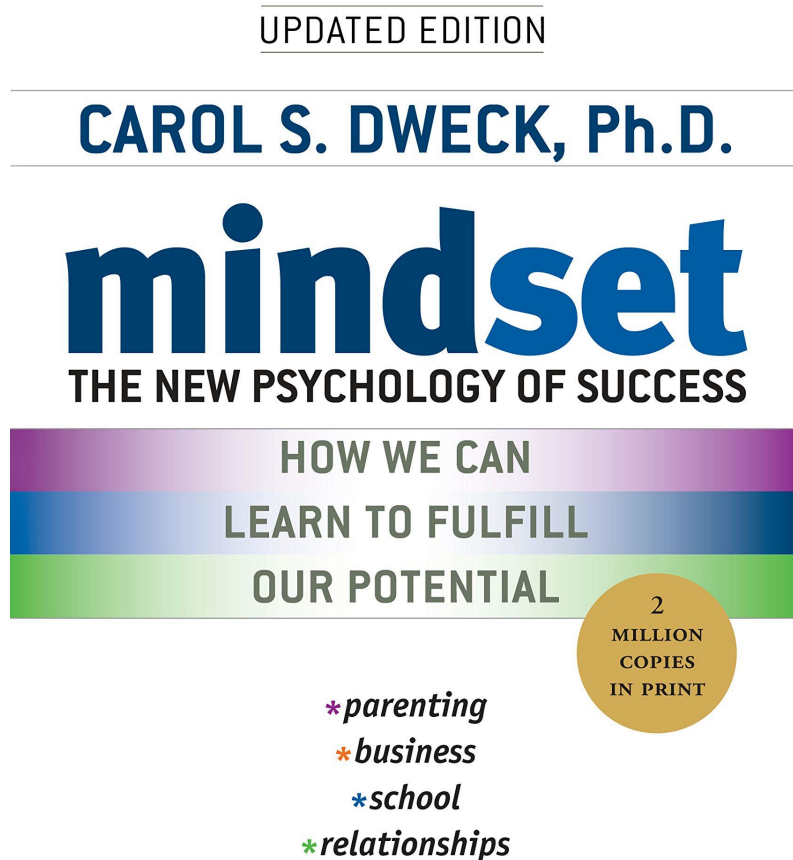
SUPPLEMENT: NETWORK GROWTH MINDSET



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Carol Dweck: Mindset



***Fixed* Mindset:**

Talent is a fixed trait.

***Growth* Mindset:**

Talent is a malleable quality;
a potential that can be
developed.

Learn more: [Carol Dweck at Google Video](#) ["Not yet" Video](#)

"Through clever research studies and engaging writing,
Dweck illuminates how our beliefs about our capabilities exert tremendous
influence on how we learn and which paths we take in life."

—BILL GATES, *GatesNotes*



Mindset “Rules”

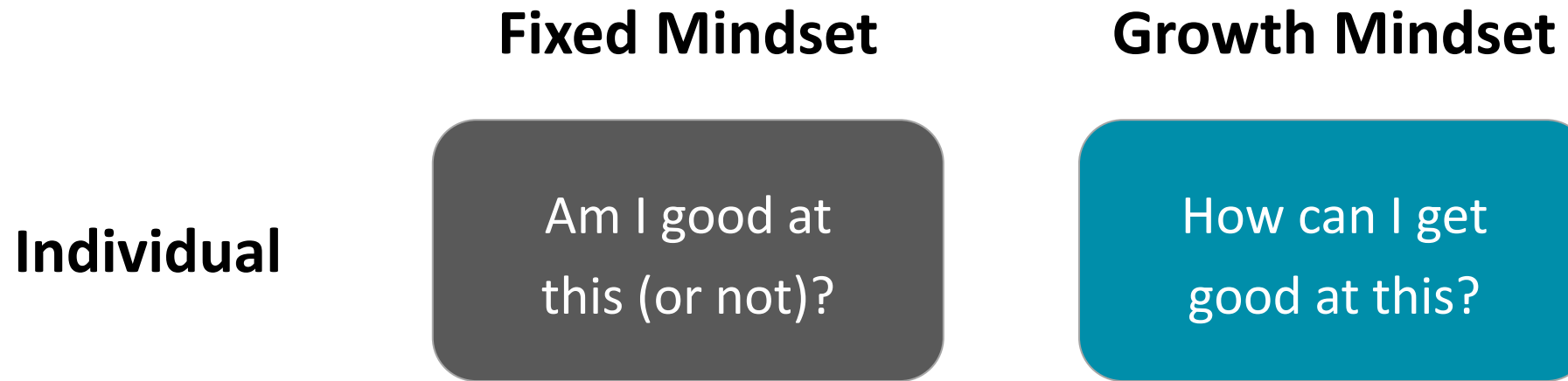
Fixed Mindset Rules

1. Look talented at all costs.
2. It should come naturally.
3. Hide mistakes and deficiencies.

Growth Mindset Rules

1. Learn at all costs.
2. Work hard: effort is key.
3. Capitalize on mistakes; confront deficiencies.

Individual Growth Mindset



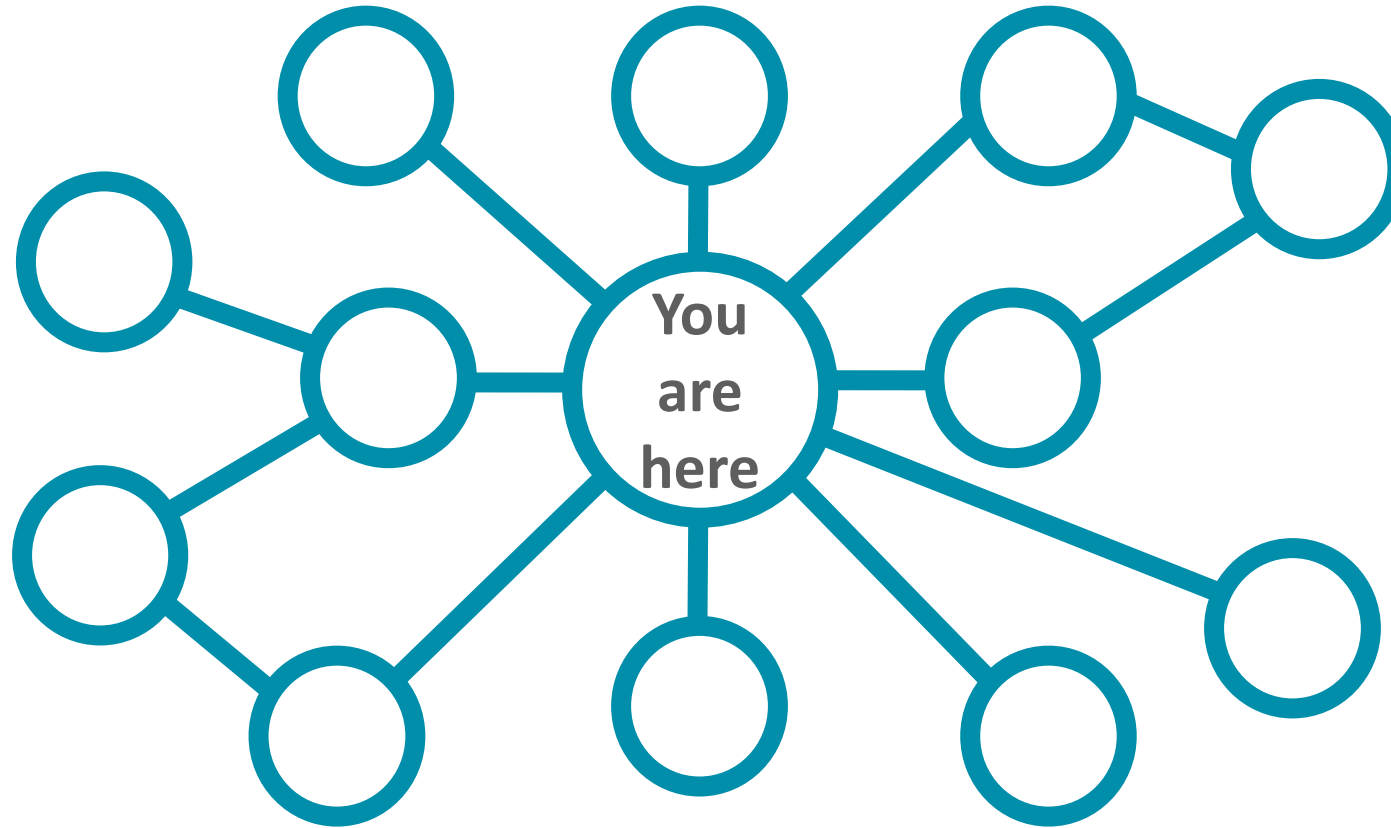
Network Growth Mindset

	Fixed Mindset	Growth Mindset
Individual	Am I good at this (or not)?	How can I get good at this?
Network	Is my network good at this?	How can I get a network that is good at this?

You



You are Your Network



Network Development

- Understand the key connections and relationships that are important to help your professional development – now and in the future
- Identify specific steps you can (and will!) take to expand, strengthen, and extend your network, and make the time and effort to invest in them
- Apply a growth mindset not only to your individual development efforts but to building and evolving your network