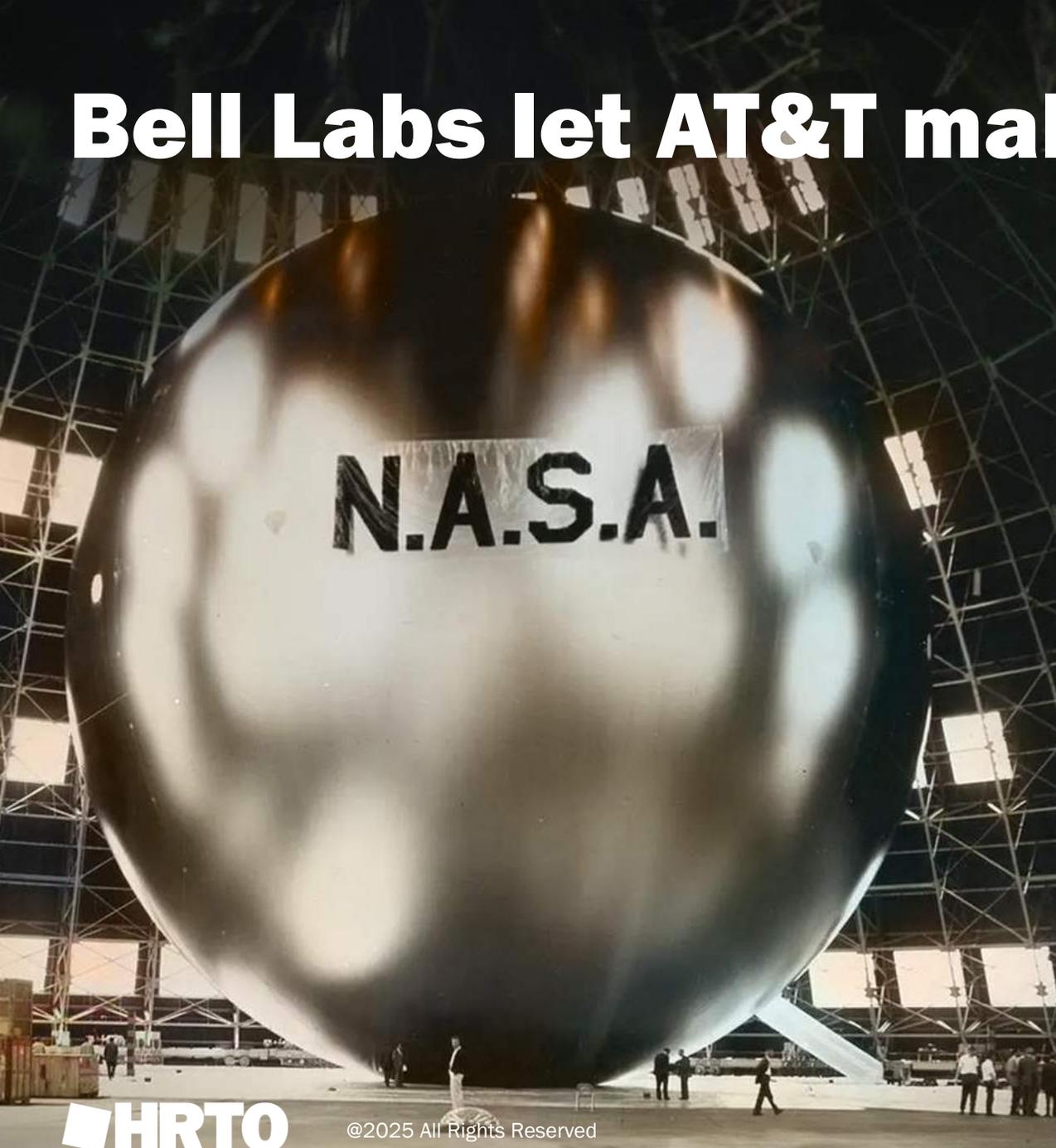


Engaging with New Innovation Ecosystems

How corporate teams can tap into innovation hubs



Bell Labs let AT&T make system transitions



Making satellite communication happen



Laser (maser)



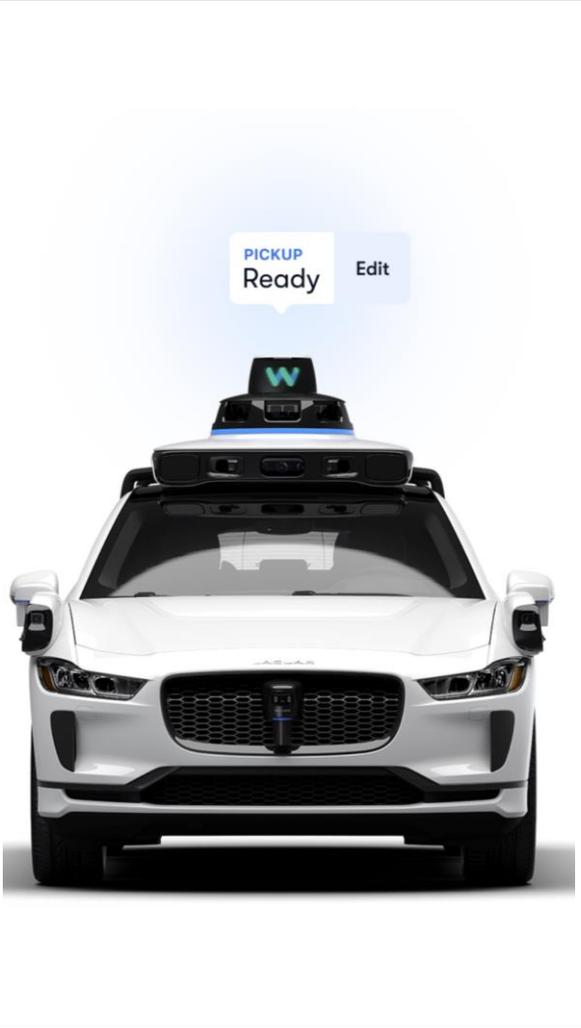
Traveling wave tube



Transistor

....and of course much more in materials science, power, electronics, chemistry, mechanics...

System transitions are happening today





**You're still
trying to
replace**

Bell Labs

**I'm telling you
we can't do it**

**But what we might be able to
do is recreate it in the aggregate**



**INNOVATION
SPACE**



Agenda

- What are innovation hubs and how do they operate?
- How — and why — should corporate innovation teams engage with them?
- What are best practices to making engagement impactful?
- What role do hubs play in innovation for system transitions?

What are “innovation hubs”?

Terminology in this area is, frankly, a mess: There’s little consistency or consensus on how terms like “hub”, “cluster”, “incubator”, “accelerator”, etc. are used

For purposes of this study, I defined innovation hubs as ***organizations helping startups and other innovative firms make progress toward commercialization***

I’ve focused on “deeptech” hubs with physical science focus, particularly in areas like climate tech, circularity, natural resources — not pure software, medical/biopharma, etc.

I’ve conducted 42 interviews with innovation hub leaders, corporate innovators who’ve worked with hubs, and startups CEOs who have been a part of them — in addition to reviewing the academic literature, news coverage of hubs, and hubs’ own websites

What forms do innovation hubs take?

Incubators



Physical office or lab space for startups, shared facilities & services, community

Example:



Accelerators

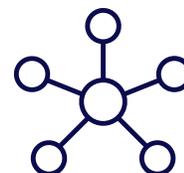


Coaching/mentoring, development support, networking & fundraising support

Example:



Industry clusters



Shared campus for startups and large firms, local economic development

Example:



Industry consortia



Associations to meet common industry challenges that fund startup projects

Example:



Incubators and accelerators predominate, with ample overlap between the two

Incubators



Accelerators



Incubator/accelerators



Industry clusters



Industry consortia



Why do you care about innovation hubs?

The usual open innovation reasons:

- Outside ideas are abundant and essential
- No firm has enough internal R&D resources to find and develop all the ideas it needs
- Large companies aren't set up to pursue radical (disruptive, horizon 3, new market, etc.) innovation

Hubs are well-suited to finding and engaging startup partners

Plus the impact of system transitions:

- Industry is facing fundamental system change — energy transition, circularity, electrification, digitization, etc.
- Internal R&D can't understand and adapt to these changes on its own
- Need new ecosystem partners needed that have the capabilities to build new systems

Hubs are sites for new industry innovation ecosystems

Why do innovation hubs care about you?

The usual startup reasons:

- Startups with promising tech lack market insight and channels to market
- Startups need assistance with pilots, demos, deployments, and scale-up
- Corporates are a good route to funding and exits for startups, particularly in energy, materials, food, etc.

Plus the impact of system transitions:

- Adapting existing systems requires knowledge of industry operations and value chains
- Selecting and advising startups requires specialized (tech & market) expertise
- “First-of-a-kind” (FOAK) tech deployment needs diverse stakeholders

Corporate partners are vital to helping startups succeed

Corporate can help hubs to change these systems

Why doesn't this happen already today?

Innovation hub leaders can be cynical about corporate innovation

"We don't really do programmatic stuff with corporates— we help our startups. Basically, these things come and go. It's innovation theater, it's not real. It's a waste of everyone's time."

—Executive Director, Incubator/Accelerator

Corporate teams are skeptical about their own ability to see impact from collaborations

"The easiest option is to engage with an accelerator, spend some money, go in, and check the box. Very rarely was it really well-thought-out. Nothing usually really comes of it."

—Sr. Manager, Corporate Venturing

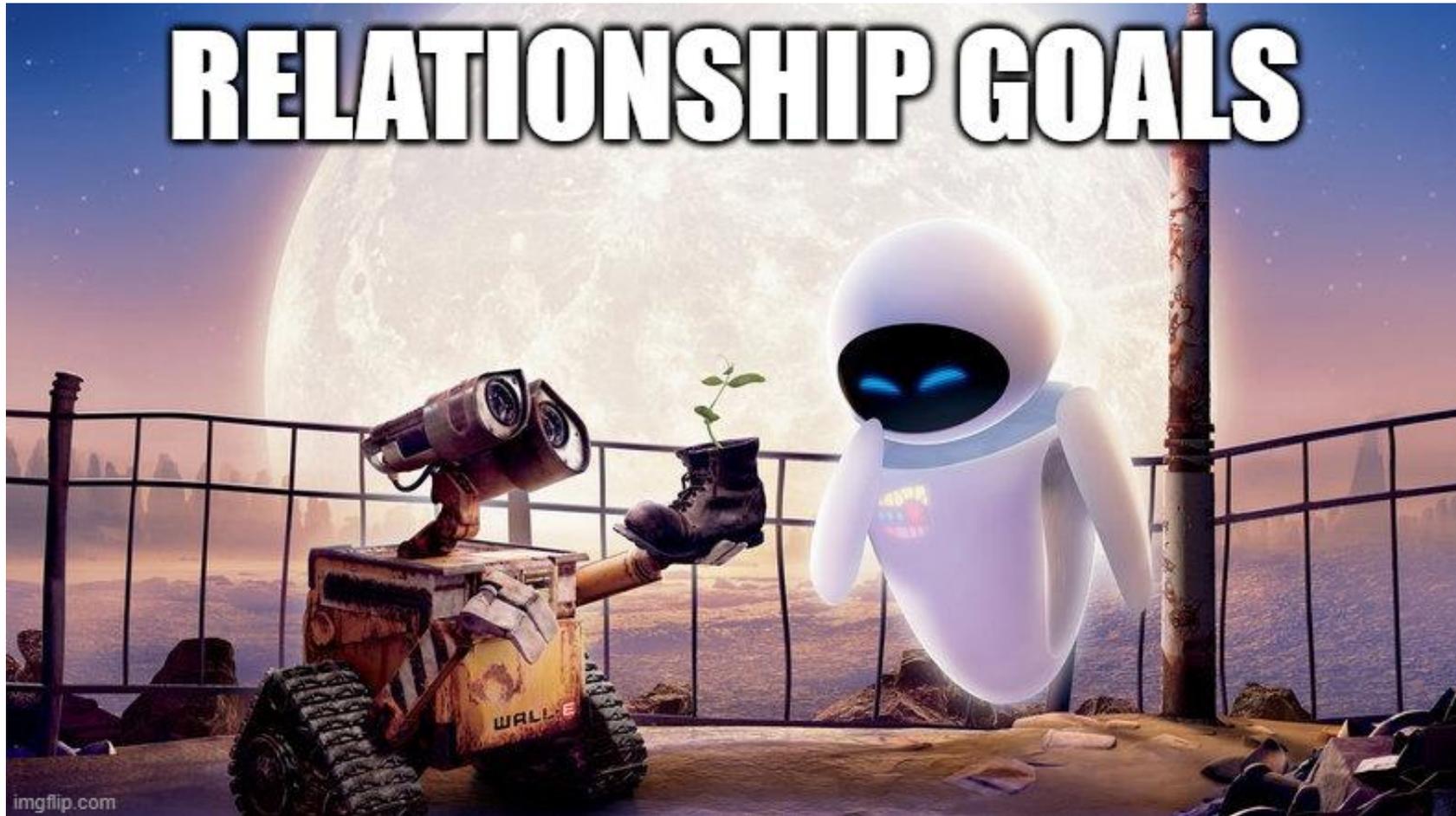
Corporate teams worry about lack of alignment and success rate

"I doubt that companies get much out of corporate sponsorships of these accelerators... the chance you come across a company working specifically on something aligned to your needs is low."

—Director, Corporate Venturing

Working effectively with innovation hubs

It's important to have...



Corporate goals with innovation hubs

1 Insight into technology trends

“We want to see what’s happening out there. And more importantly how we can do more open innovation — it lets us identify new things.” —Partner, Corporate Venturing

2 Partnerships and deal flow

“These programs help with you scouting... Between quantity and quality of the companies you find, that is where innovation hubs definitely help.” —Director, Technology Scouting

3 Network and reputation

“It’s network building — we want to be a part of the ecosystems. If someone is developing a certain material, people know to come and talk to us.” —Technology Scout

4 Connections to other corporates

“Corporate to corporate collaboration is an important piece. It’s not just the startups, it’s also forming partners with other corporates.” —Director, Technology Scouting

5 Changing innovation culture

Some come to get a sense of what it’s like to be around startups. It is that culture of innovation — what better way than to be around startups all the time?” —Executive Director, Incubator

Innovation hub goals with corporates

1 Market and operational insight

“Corporations provide insights into the challenges of their particular industries. They will say, yes you really have a good product, but here’s all the other things you need.” —Executive Director, Incubator

2 Funding and partnerships for startups

*“Our overarching goal is to connect incubator startups to corporate partners, to help them deploy commercially.”
—Program Director, Incubator*

3 Assistance in assessing and mentoring startups

“Having corporate partner benefits us, to be able to use their resources and expertise. They donate some experts, both on the review side and mentorship side.” —Managing Director, Accelerator

4 Funding for the hub

*“To help us subsidize the rent for startups, they’re integral — startups would not be able to afford market rate in our location.”
—Program Director, Incubator*

5 Enabling pilots or demos

“We also support startups with test-bedding, deploying in potential client sites. We need to have corporate partners, it’s essential — ones ready to adopt new solutions.” —Program Lead, Accelerator

Hubs' models for corporate engagement

Ad-hoc connections and info sharing

"Wherever we come up with needs, or they come up with interesting opportunities for us, we'll have a meeting. There's no recurring framework — we talk to each other whenever we need."
—GM, Corporate Venturing

Example:



Customized vetting and matching

"[Hub] attracts many startups, they do all of the work for the program and highlight how to work with the startups. Very structured program, led to successful innovation"
—Manager, Technology Scouting

Example:



Active partnership facilitation

"[Hub] did a lot of work with the corporate, help them clarify their process. You get to literally have facilitated meeting — they would set expectations on both sides to make the trial as smooth as possible."
—Startup CEO

Example:



Greater hub involvement (and greater corporate investment...)

Optimize partnerships on three factors

1



Goals

Corporate

- Technology trends
- Partnerships/deal flow with startups
- Network and reputation
- Connections with other corporates
- Innovation culture

Innovation Hub

- Market and tech insight
- Startup assessment and mentoring
- Partnerships and fundraising for startups
- Funding for the hub
- Pilots or demos

2



Structure

- Ad-hoc connections and information sharing
- Customized vetting and matching.
- Active partnership facilitation

3



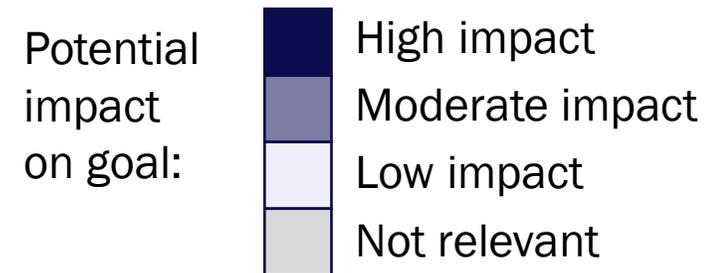
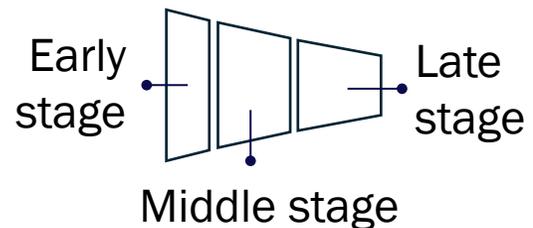
Focus

Relevant technology/ industry, and stage:

- Early-stage
TRL ~1-4
- Middle-stage
TRL ~5-7
- (Sometimes)
Later-stage
TRL~8-9

Finding the right partnership model

| Model | Goals | | | | |
|-------------------------------------|-------------|----------------|-------------|-------------|---------|
| | Tech trends | Partners/deals | Network/rep | Other corps | Culture |
| Ad-hoc connections and info sharing | | | | | |
| Customized vetting and connections | | | | | |
| Active partnership facilitation | | | | | |



Getting the most impact out of partnerships

Best practices: Prepare both startups and corporate partners

Corporate and startups can be a culture clash: Corporations may be too slow-moving, startups may lack basic business savvy

Innovation hubs can set expectations and mediate misunderstandings

Standardized agreements (NDAs, MTAs, JDAs) can help facilitate engagement

“At [accelerator] everyone’s expectations were set in advance. Coach the corporate, you can’t own IP right now, that doesn’t work. Coaching startups, don’t say this is worth a million dollars – be reasonable.”

“Documentation wasn’t onerous, but we knew what we should and shouldn’t do. We were comfortable as the mouse engaging the elephant.”

—Startup CEO

Best practices: Bring in key corporate business stakeholders early

Strive to have stakeholders from the relevant business units as involved as possible early on

Leverage input in problem definition, startups selection, initial discussions, and of course in any pilot or proof of concept

An innovation hub partnership can be a catalyst to get internal stakeholders engaged

“We always try to bring in business people early, meaning from the beginning. These people have a very busy schedule, but it is essential to have them, so our job is to make sure business understands the value.”

“I keep asking the question, when someone says ‘we are very excited’ — who is excited? If it’s a researcher who’s excited, this is not bad, but I like the excitement from business people.”

—Director Corporate Venturing

Best practices: Design in frequent — and two-way — communication

Partnerships with hubs can't be hands-off — putting up money and just waiting for opportunities to come in doesn't work well

Regular engagement (even having staff onsite) helps build trust and understanding, and allows for serendipity

Corporate teams get better results by sharing their insight and expertise — as in “reverse pitches” where firms share industry challenges

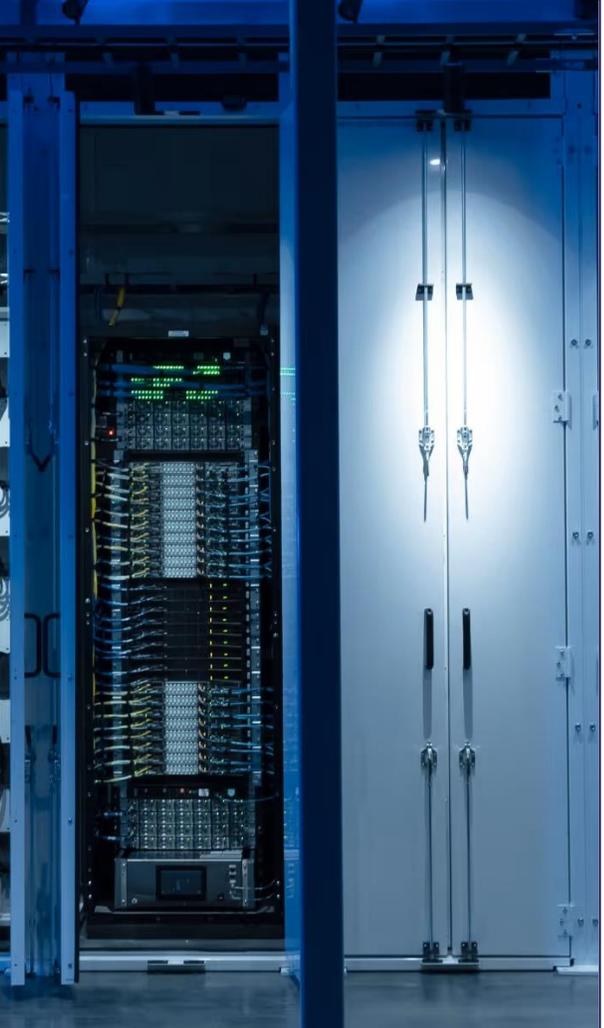
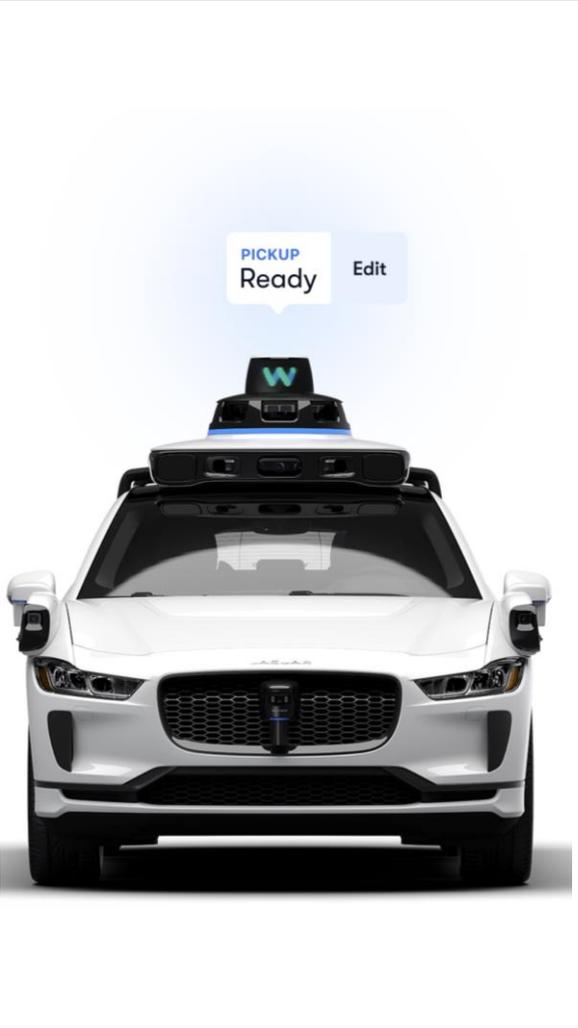
“We do reverse pitches, and also have them present deep dive on whatever tech a corporate is knowledgeable about and understands.”

“We try to run things that get people together, and a lot of time the corporations can be the catalyst for that. I'm going to teach a course, articulate a problem — companies in the room saying they can't do that individually, but if we got together we might have a solution.”

—Executive Director, Accelerator

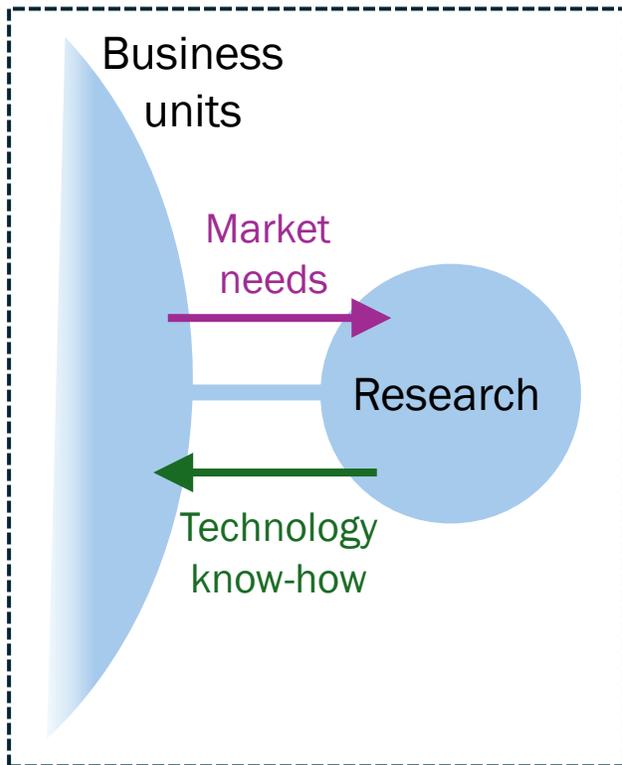
How innovation hubs will evolve innovation processes

System transitions are happening today



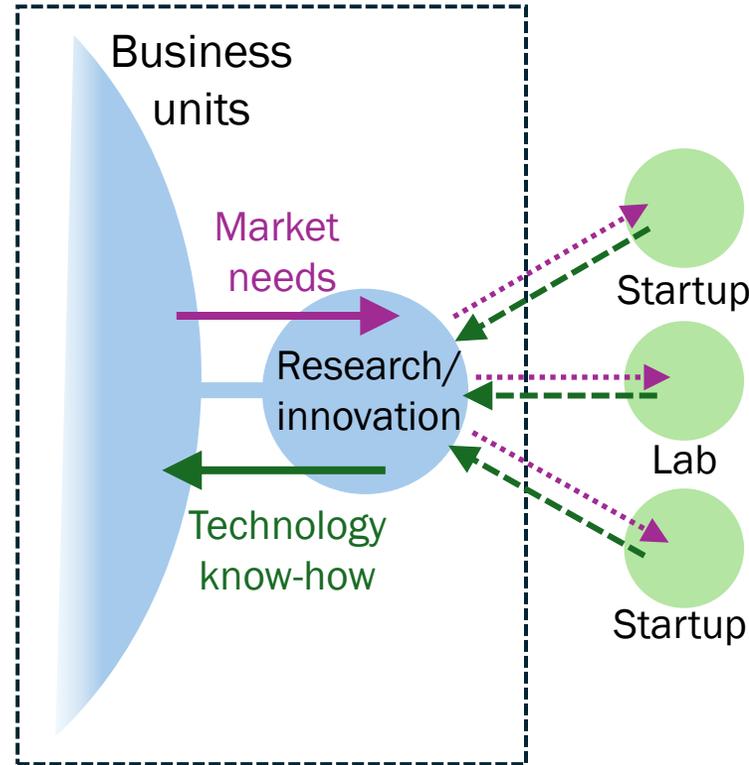
The evolution of innovation systems

Traditional internal R&D



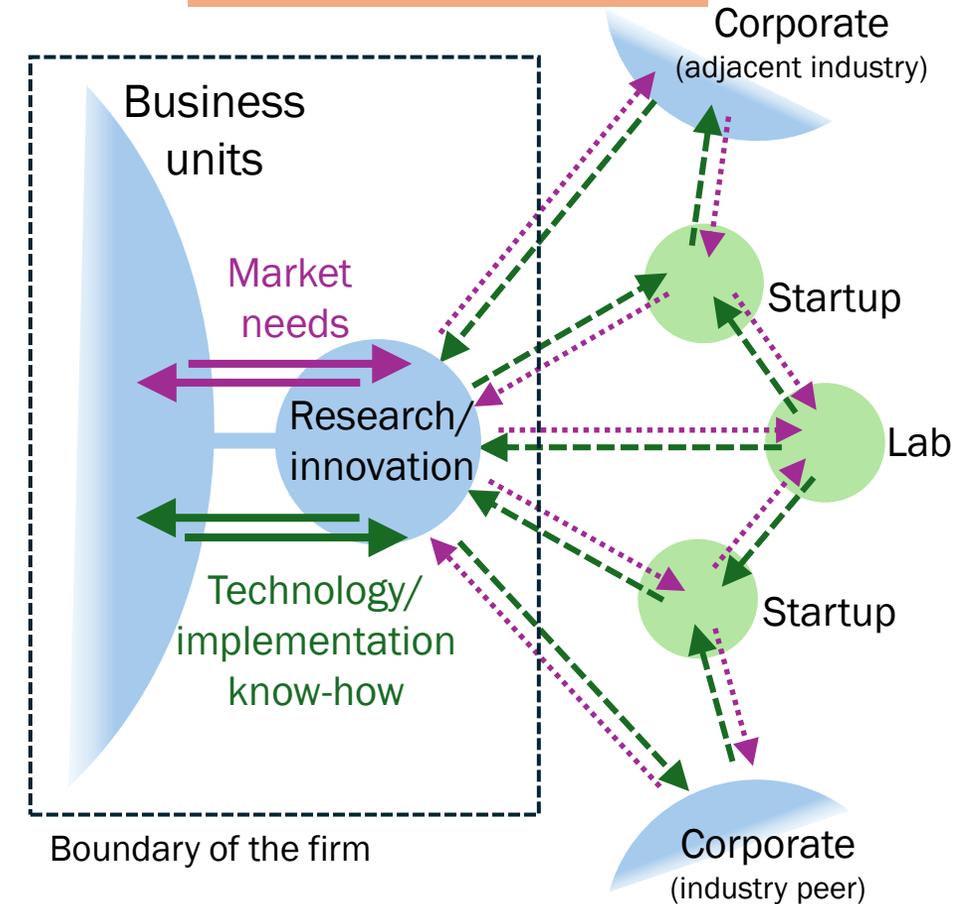
Boundary of the firm

Open innovation



Boundary of the firm

Ecosystem innovation



Boundary of the firm

(Proto-) case study: Carbon capture

Direct air carbon capture (DAC) startup Phlair was part of the Carbon to Value (C2V) accelerator, [forming partnerships](#) with:



Membrane technology



Carbon sequestration



EPC work



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Image source: [Phlair](#)

Conclusions

- Engaging with innovation hubs can help corporate teams to navigate system transitions
- Defining goals, and aligning on the right engagement models and focus areas to meet them, is key to success
- Look to hubs as sites for ecosystem innovation — building the new value chains needed to for system transitions



Thank you

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