
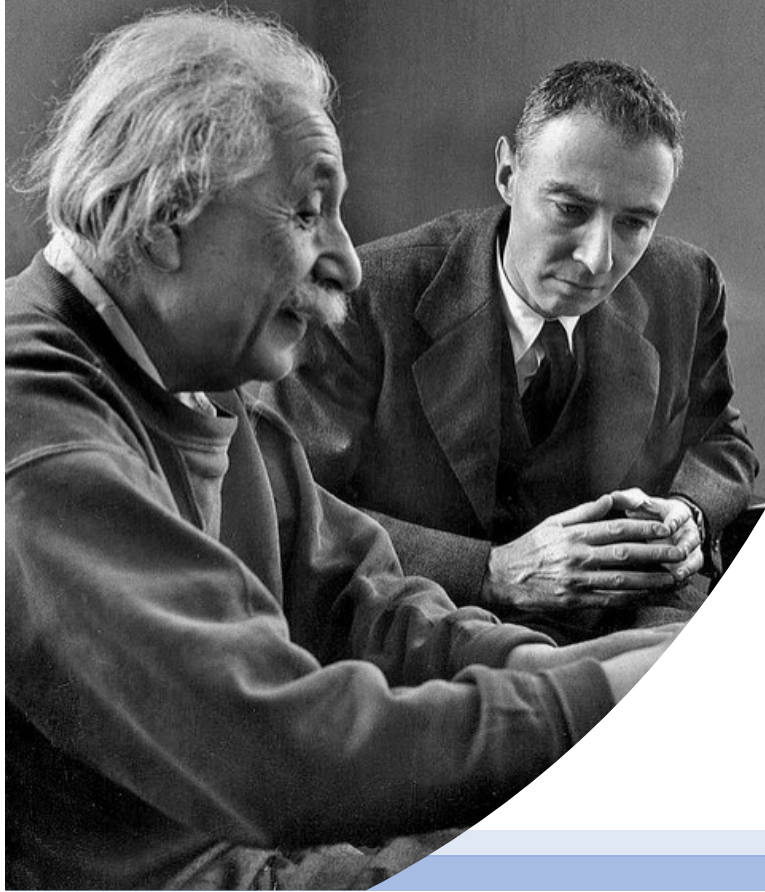




Championing New Models of Flexibility to Enhance Scientific Impact

presented by Francesca Poli (Princeton Plasma Physics Laboratory)
on behalf of the Oppenheimer Science and Energy Leadership Program
OSELP Cohort 4





Oppenheimer Science and Energy Leadership Program

Program Goals:

- Build a **network** of emerging leaders.
- Provide Fellows with a rich, **systems-level understanding** of the Labs, DOE, and stakeholders—encompassing the full spectrum of DOE missions and Lab capabilities.
- **Candid discussions** with Lab and DOE leadership on challenges and opportunities.
- Provide **mentorship** to Fellows to develop their ability to **critically assess** the DOE-Lab system through think-pieces that address challenges and opportunities facing the system.

I am a plasma physicist, I have worked in remote teams (almost) my entire career

- This is the reality of fusion, an international project by nature, a collaborative effort by need
- What does it look like working with remote teams?
 - Connecting at dinner time to check that your diagnostic on the other side of the planet is taking data
 - Conducting experiments from a virtual control room (replacing jet lag with sleepless nights)
 - It is also about creating relationships across the border



Remote control room at General Atomics, part of the collaboration with China

This is us, during our first week together in New Mexico, Jan 2020



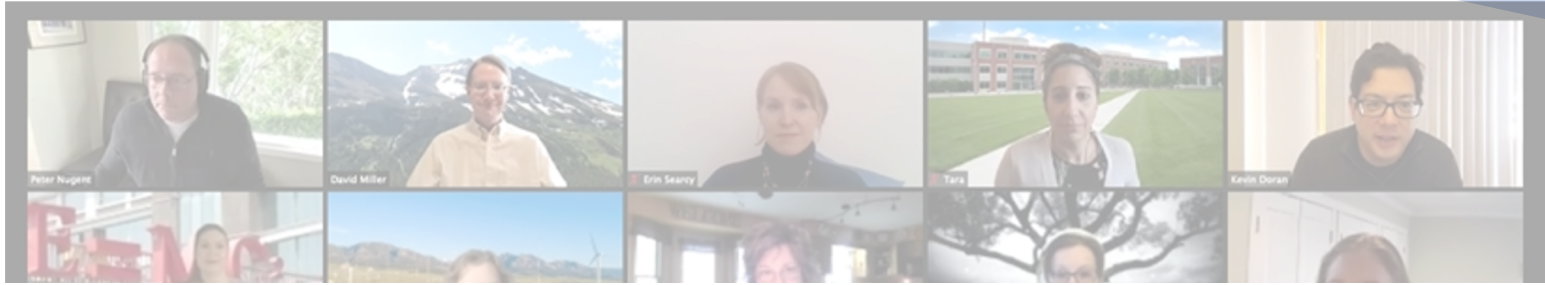
This is us, during our first week together in New Mexico, Jan 2020



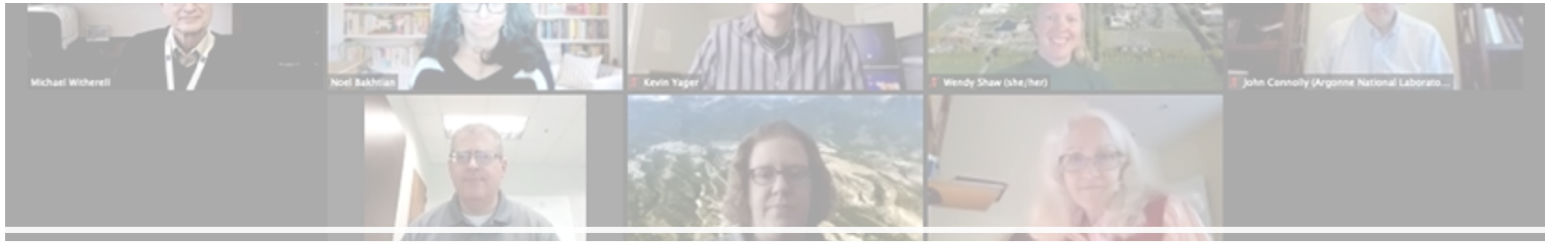
Two weeks later ... the pandemic exploded in the US ...



Still us ... still smiling, still together ... on Zoom



Would it have been the same experience if we had not spent that ONE week together, in-person?



Still us ... still smiling, still together ... on Zoom

We realized we had a unique opportunity to make an impact

- **As a group** who needed to work together to deliver a product (our think pieces) we reflected on ways we could be effective
- **As managers of groups**, we reflected on how our teams could stay productive and how we should adapt our leadership style to the new, evolving situation
- **As future leaders**, we reflected on how new technologies could be embraced to enable and facilitate collaborative interactions across the DOE complex

We managed to do something no cohort had done before

we “visited” ALL 17 national labs



and we have tried it all ...

Microsoft Teams

Zoom

Webex

BlueJeans

Virbela

GatherTown

GroupMe

Slack

and – rarely – cell phones

Over 3500 e-mails exchanged, 225 hours visiting the labs, nearly 100 hr+ meetings with the individual think pieces and whole cohort, and 3 happy hours/Slack training.

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and we have tried it all ...

Microsoft Teams

Zoom

Wehex

This is when we asked ourselves: wouldn't it be nice if there were ONE single tool ALL labs agree on using?

=> Things have changed since ... now we have Microsoft Teams

Slack

and – rarely – cell phones

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The 'quantum leak' in digitization and the risk of many choices

In a survey published in October 2020, McKinsey found that companies had adopted as much new technology over the previous several months as they had over several years prior.

A study by Cornell University and Qatalog finds that 43% of employees said they're spending too much time switching among different tools to get their jobs done, which “promotes context switching and causes a drag on our creativity.” **On an average day, workers are spending an hour searching through different tools for the information they need.**

Credit: Does Your Team Really Need Another Digital Tool? by [Ryan O'Hara](#), October 01, 2021 Harvard Business Review (online)

We recommended to the NLDC an exchange program

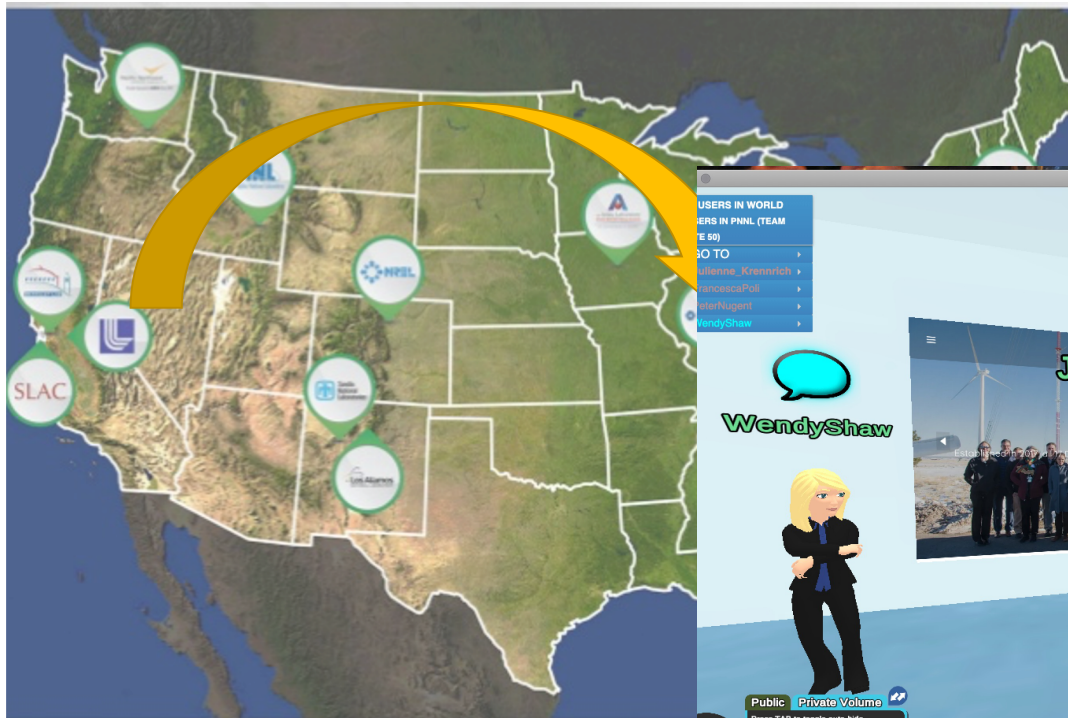


Flexible - to support a diverse demographic

Hybrid – to minimize disruptions to the home institution

... and we gave a lot of thinking about the challenges of such scheme

We experimented with software to see 'how this could work'



Flexible - to support a diverse demographic




How can we do a better job at partnering?

What about a *virtual* Management and Operation (M&O) contract?


- Not the usual M&O, not a contract
- But an organization that enables connectivity, mobility and efficiency

for the entire National Lab system

- that could hold people's retirement accounts
- and allow people to move between labs without barriers



What actions are the labs taking to embrace hybrid work?



All national labs are embracing hybrid work in their organization

- From fully remote to fully onsite, depending on roles, responsibilities and the lab mission
- More focus on equity and inclusivity (focus on the employee rather than only on the job)
- Rethinking office spaces and meeting rooms
- A more flexible layout to enhance interactions
- Experimenting with new meeting formats
 - everybody has a laptop, both in-person and remote participants
- iPads for everybody!


Everybody in the room should feel they belong to the meeting




Ikea meets Lego: Google redesigns its office space.

Article published on The New York times on April 30, 2021
by [Daisuke Wakabayashi](#)

Google's new meeting rooms are designed to put virtual attendees on the same footing as in-person attendees.
Credit: Cayce Clifford for The New York Times



How are user facilities evolving to enable scientific productivity in a hybrid world?



Not just a response to the pandemic, but planning ahead

Interact with science – solutions to fit material needs => mail samples in/out
=> remote handling capabilities
=> virtual participation

Scientific exchange – solutions to fit intellectual needs => data handling and transfer
=> real-time access, data sharing

Scientific argument – solutions to fit human needs => virtual interaction tools

How can we build trust in a virtual environment?

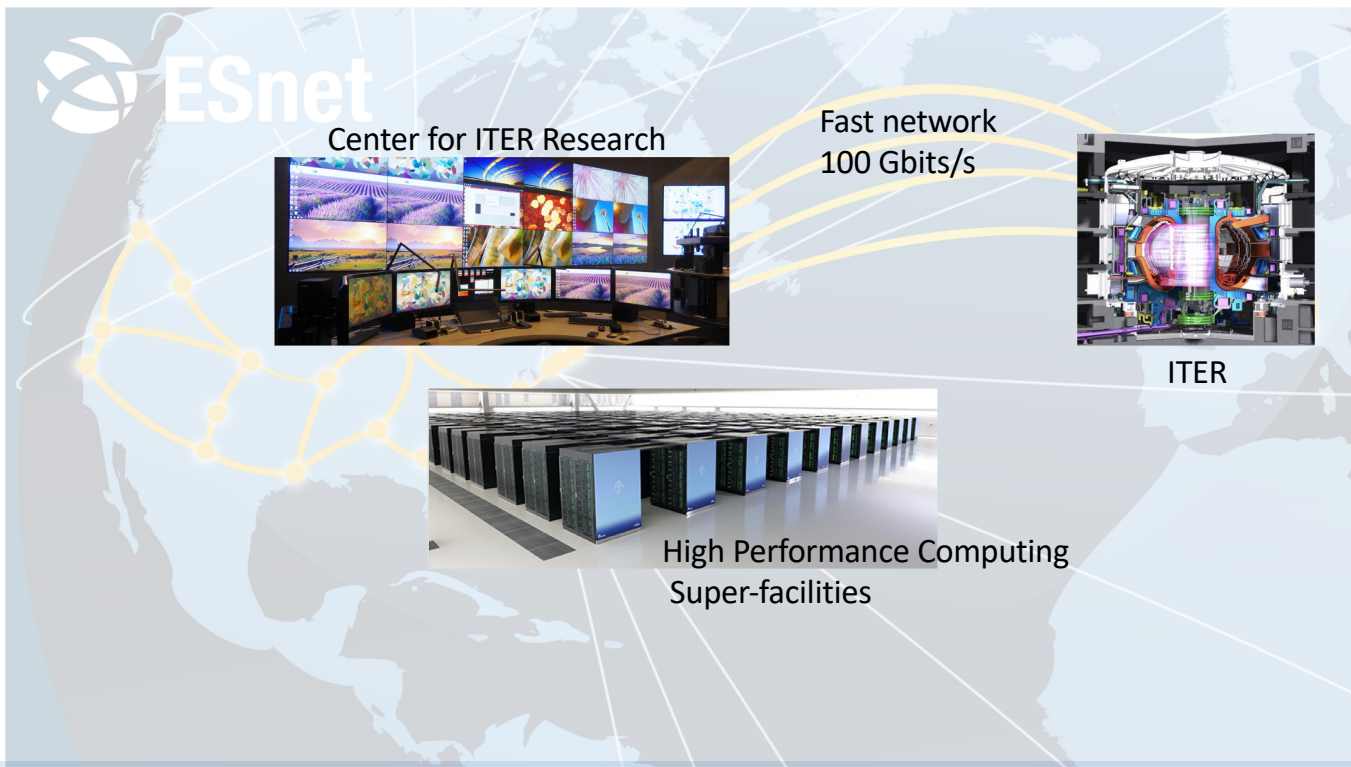
The pandemic has forced us to think beyond our comfort zone


- Reconsider the future of the workplace
- Understand the multi-facets of being *inclusive*
- Embrace asynchronous work

It has inspired us, the OSELP Cohort4, to re-imagine how we would like collaborations across the DOE complex to look like


- as a 'global' network
- that breaks down barriers

The future of fusion and ITER experiments rests on distributed teams, rapid data sharing and HPC analysis *during operations*





There is no virtual tool that can replace the power of human bonding in building effective remote teams and long-lasting collaborations



Thank you, Oppenheimer Science and Energy Leadership Program

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