



Resiliency: Be Positive #ChangeAgents

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people-centered internet

This presentation in its entirety is unclassified



This is our home
3.7 billion miles away

a “Pale Blue Dot”
the sunlight reflected from Earth took
5½ hours to reach Voyager I in 1990



when Voyager I launched in 1977
4.2 billion humans lived on Earth

global GDP = 7.2 trillion USD
the Apple II went on sale that year
running at 1 MHz w/ 4 KB of RAM



Voyager I traveled 3.7 billion miles by 1990
5.3 billion humans lived on Earth

global GDP = 22 trillion USD

Windows 3.0 was released and

CERN launched the first web server at info.cern.ch

by 2013 >850 million web servers online
7.1 billion humans lived on Earth

global GDP = 75 trillion USD
7 billion global networked devices
4 Zettabytes (ZB) of digital content globally





by 2022, 75-300 billion networked devices
8 billion humans will live on Earth

global GDP = ?? trillion USD

7 billion humans online, more than 85% of the world

96 ZB of digital content > all human eyes see/year

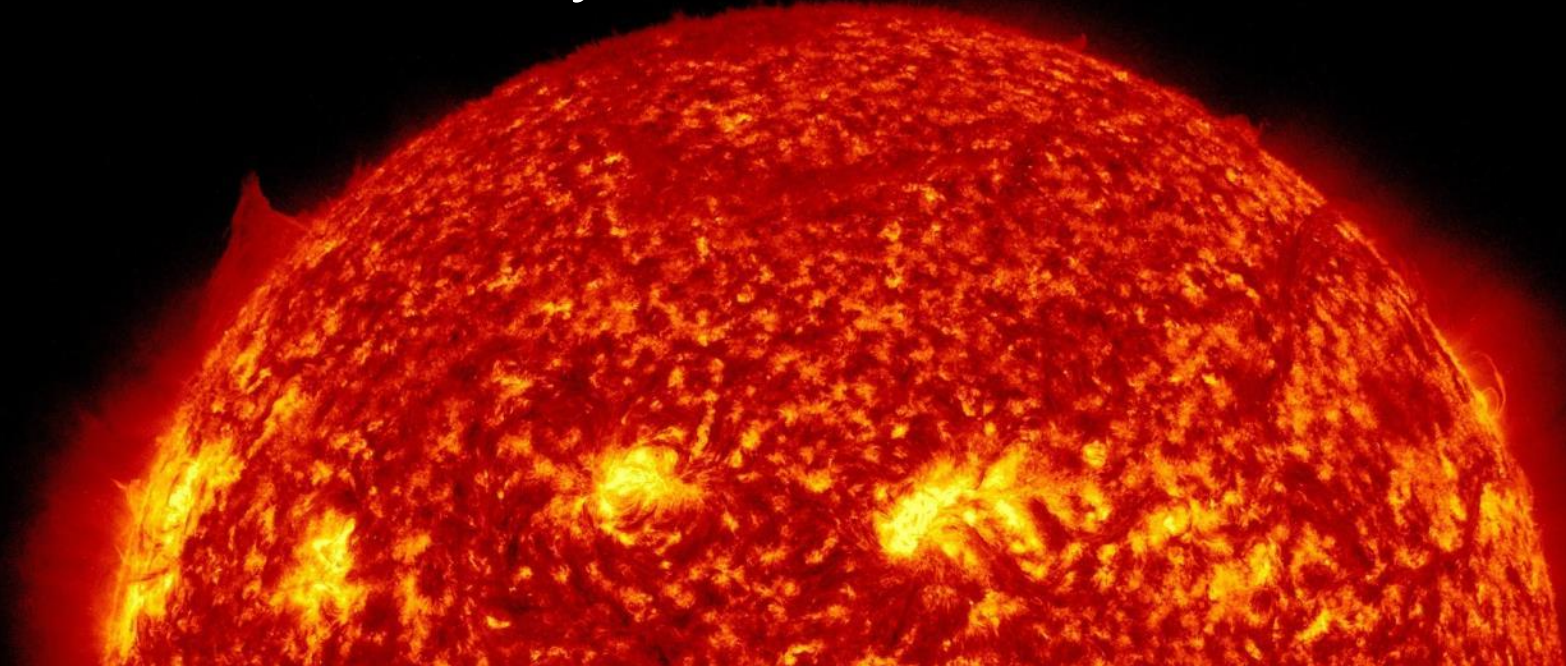
Teaching & Transforming for the Future

if we take the 2^{32} (~4.3 billion) numbers addressable
by IPv4 & put them into a beach ball



Teaching & Transforming for the Future

the 2^{128} (~340 followed by 36 zeros) numbers
addressable by IPv6 = the volume of our **Sun**





Our World Is Changing Exponentially

**We Need To Empower Everyone To Be
Part of Positive Changes Across Sectors**

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**The Next 7 Years
Will See More Change than the
Last 20 Years Combined**

(1) Power of Diversity

- Learned perspectives may limit the search space any one individual uses to reach an answer, even for “smart” individuals



IQ view of the “Alpha” Group



IQ view of the Diverse Group

(1) Power of Diversity

- Multiple individuals with varying perspectives expand the search space employed, the result is a diverse crowd has more “tools” to apply



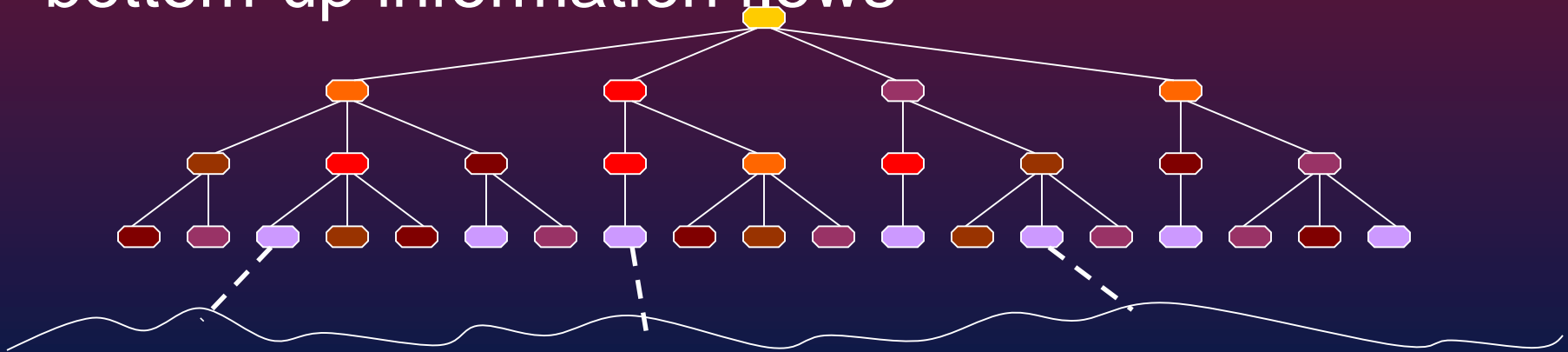
Toolbox view of the “Alpha” Group



Toolbox view of the Diverse Group

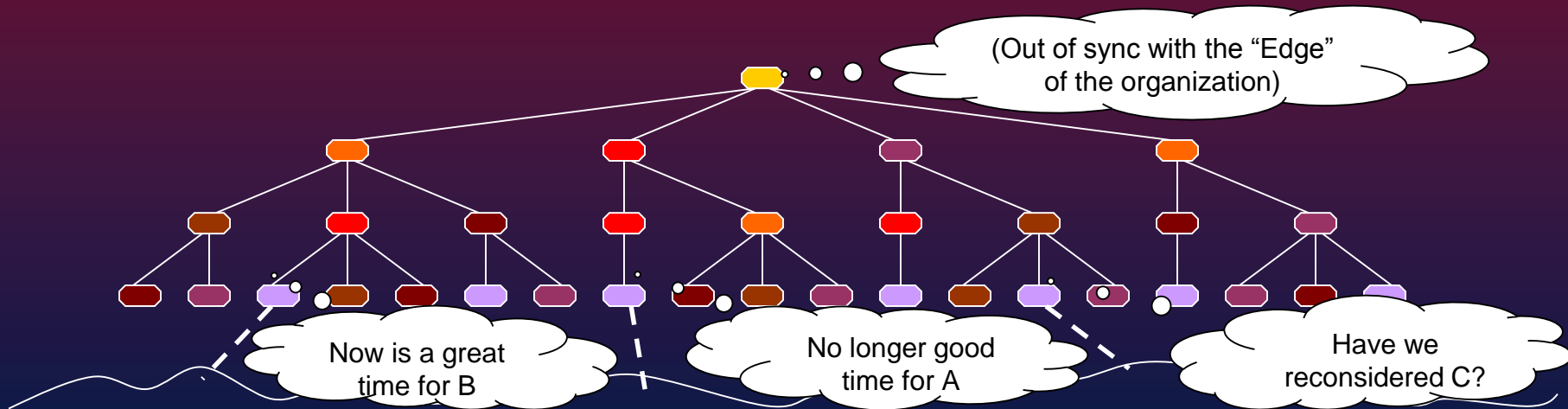
(2) Power of the Edge

- Traditional organizations exist to harness worker output, usually a top-down approach
- Yet top-down hierarchies restrict opportunities for bottom-up information flows



(2) Power of the Edge

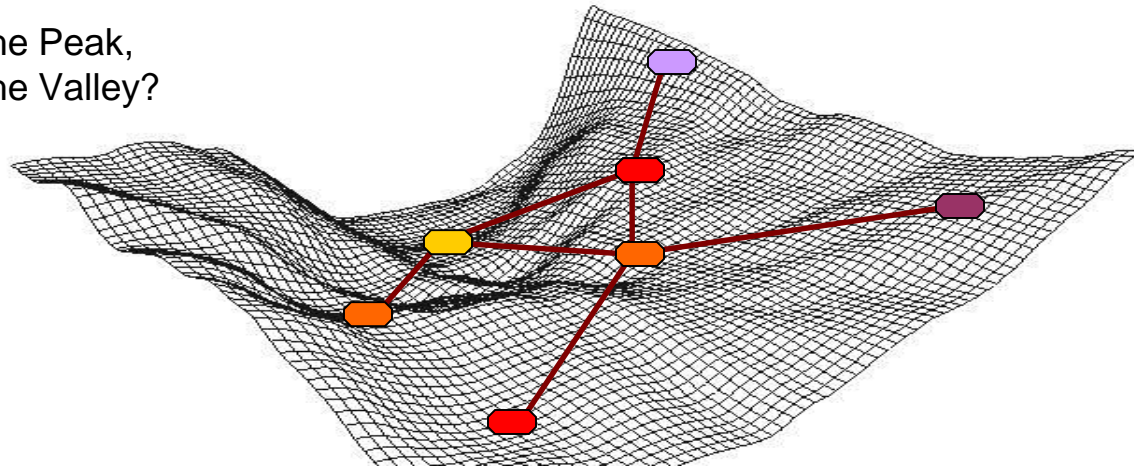
- If the organization doesn't encourage bottom-up insights, highly probable that the top could lose relevancy despite larger scope



(3) Power of an Ecosystem

- Where any one individual (or team) is looking may no longer be relevant; different views can better scan the environment

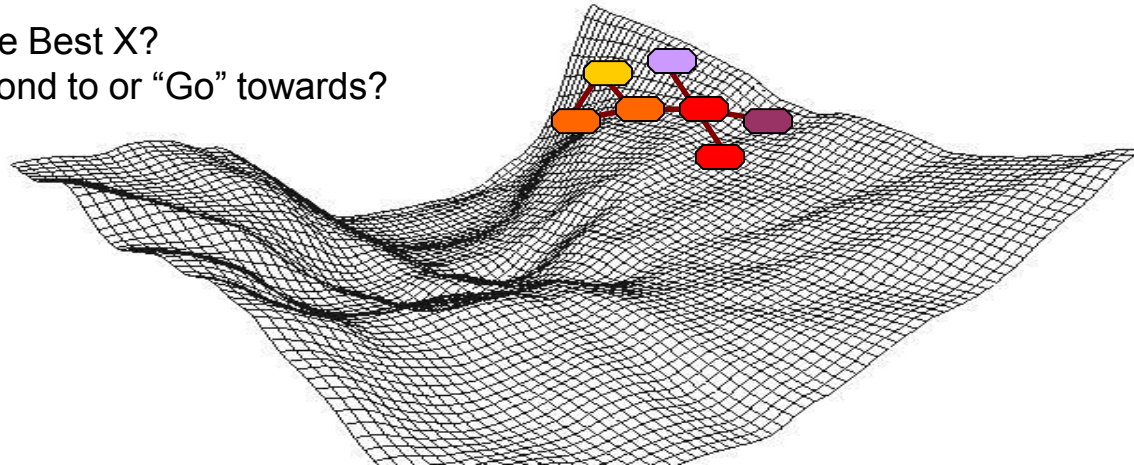
Where is the Peak,
Where is the Valley?



(3) Power of an Ecosystem

- Through chatter and conversation, new threats or opportunities can be addressed through swarming + rapid mobilization

Where's the Best X?
... to Respond to or "Go" towards?



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change
isn't easy



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change
isn't easy




leaders don
“flak jackets”

Experiments Shape Perspectives


both Expertise & Experiments
have the root “ex peria” = out of danger

the U.S. representative democracy was
born from an Experiment in self-rule
“out of danger” came Experience

The background of the slide is a deep blue space scene. In the upper left, the golden-brown rings of Saturn are visible, curving across the frame. A bright, glowing blue arc, likely representing Earth's horizon or a similar celestial body, curves from the left towards the center. In the lower right, a small, bright blue star is visible, with a blue arrow pointing directly at it from the left.

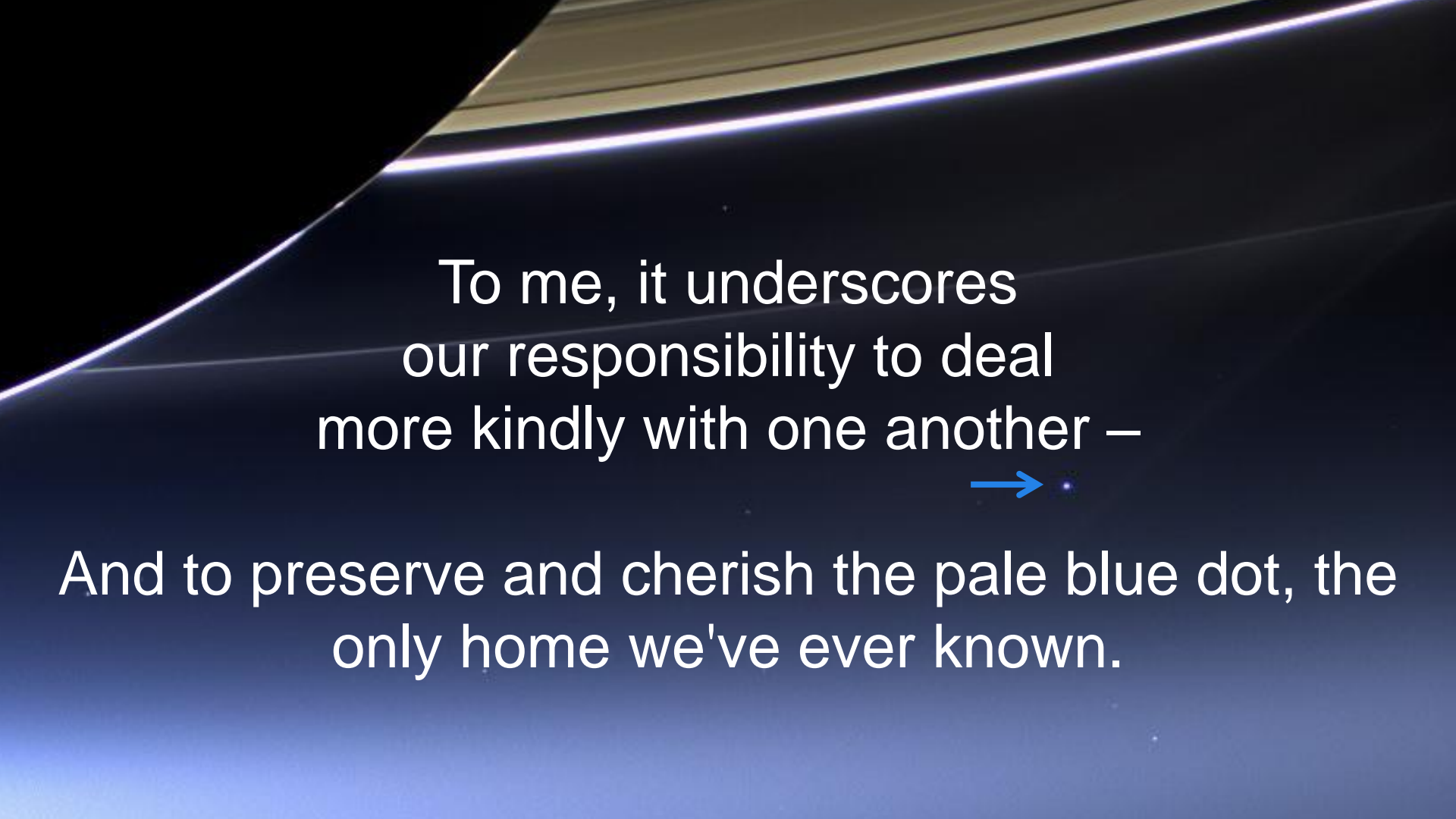
Carl Sagan in 1994:
Look again at that dot.
That's here. That's home.





That's us.
On it everyone you love,
everyone you know –

Everyone you ever heard of, every human being who
ever was, lived out their lives.

The background of the slide is a dark blue space scene. In the upper left, a portion of Earth's horizon is visible, showing the curvature of the planet and the white atmosphere. A bright, glowing white and blue streak, possibly a comet or a satellite trail, cuts across the upper half of the image from left to right. The overall lighting is dim, with the primary light source being the streak and the Earth's horizon.

To me, it underscores
our responsibility to deal
more kindly with one another –



And to preserve and cherish the pale blue dot, the
only home we've ever known.



Needed Now More Than Ever:
#ChangeAgents
for Our Exponential Times

be bold, brave, and benevolent

Questions

Please wait for the **microphone** before asking your questions



State your **name & company**

Please don't forget to...

complete the Post
Event Survey

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Thank You



Intelligence and National Security Forum