



DAMA Presentation

Home Insert Draw Design Transitions Animations Slide Show Review View Recording Help

Share Comments

Font Color Fill Line Style Background Color

Source Sans Pro 12pt

Align Center

Design Ideas Format Background

Sorry, no design ideas for this slide.

When we have design ideas, we'll show them to you right here.

[Learn more](#)

The Industrial Internet of Things (IIOT) and the Enterprise

August 17, 2021

Click to add notes

Slide 1 of 12 English (United States) Accessibility: Invert colors

- 1 The Industrial Internet of Things (IIOT) and the Enterprise
- 2 NOY at a glance
- 3 The Power of Technology
- 4 Communication spans through time
- 5
- 6
- 7
- 8

The Industrial Internet of Things (IIOT) and the Enterprise

August 17, 2021



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NOV at a glance

579

Locations
worldwide

\$5.21B

Market
capitalization

29,903

Employees

\$7.04B

Annual revenue

61

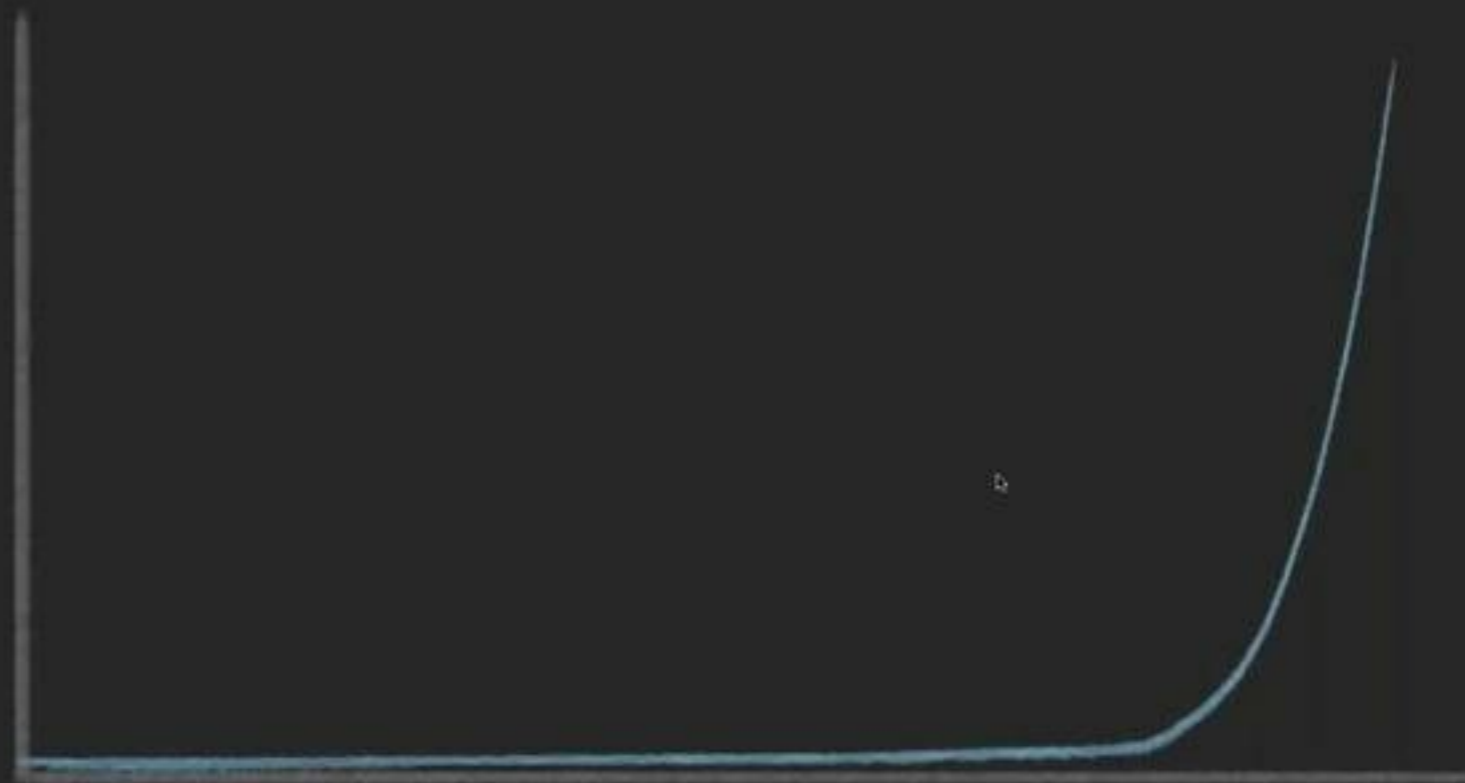
Countries

200+

Acquisitions

The Pace of Technology

Communication speed through time

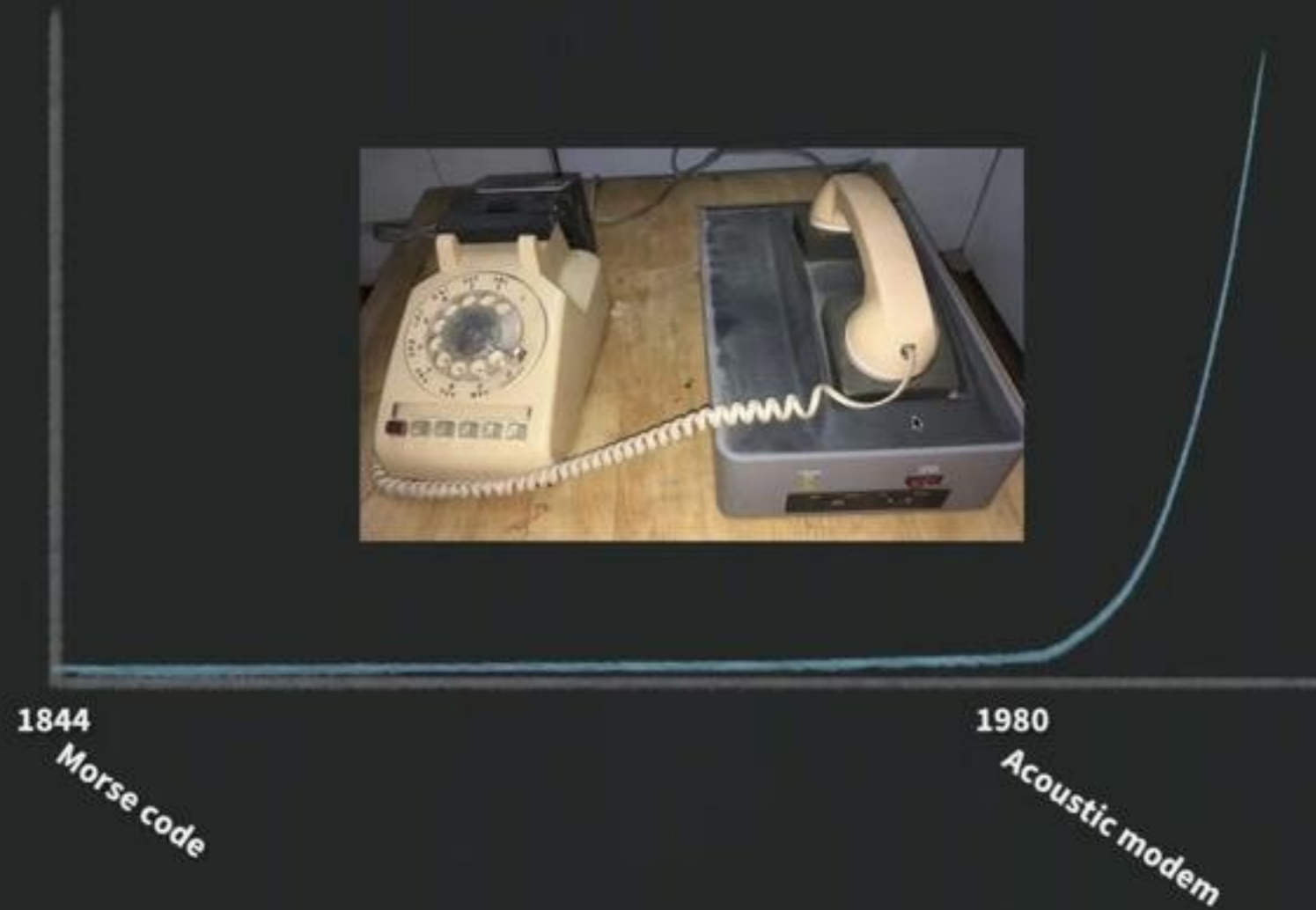


Communication speed through time

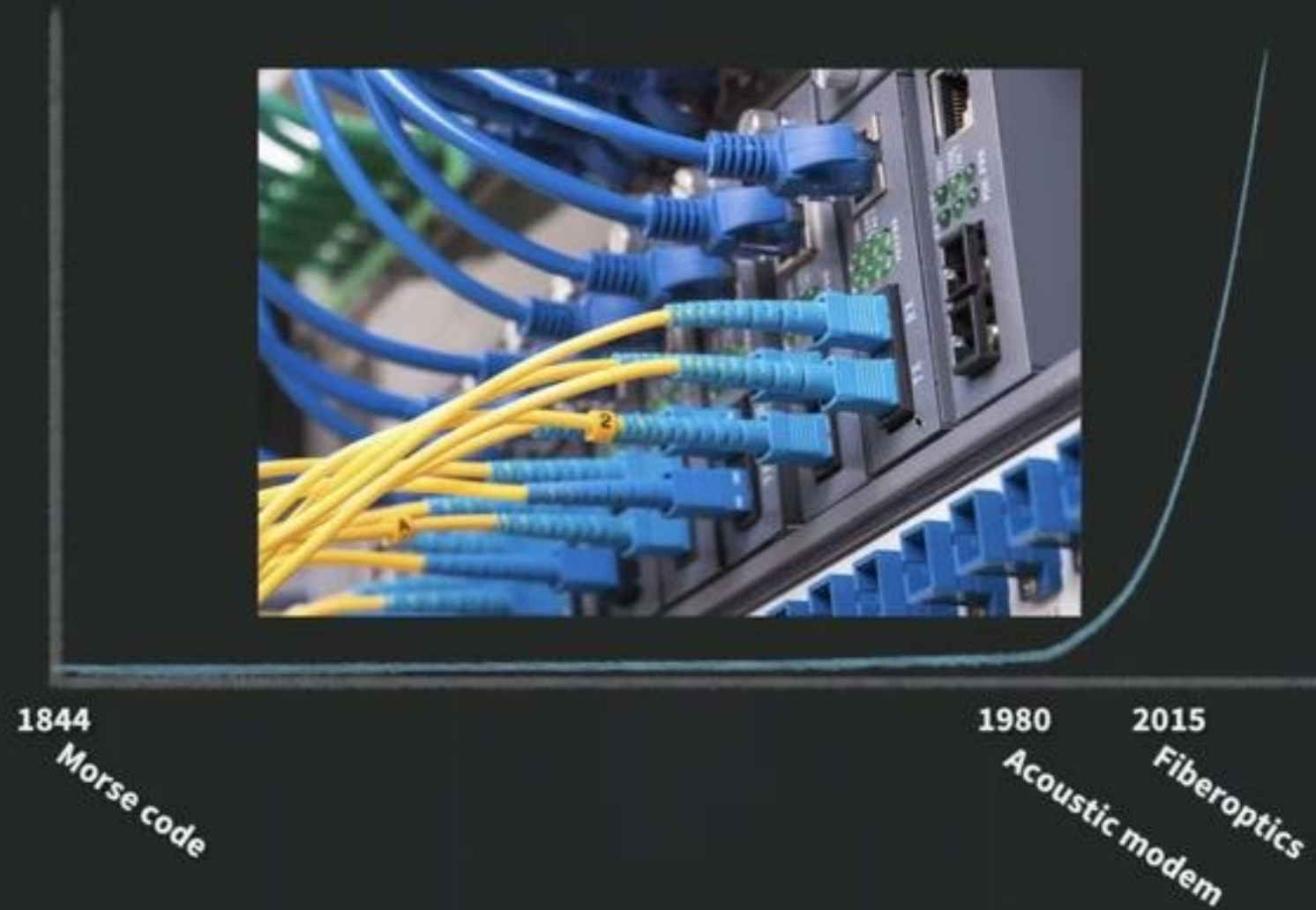


1844
Morse code

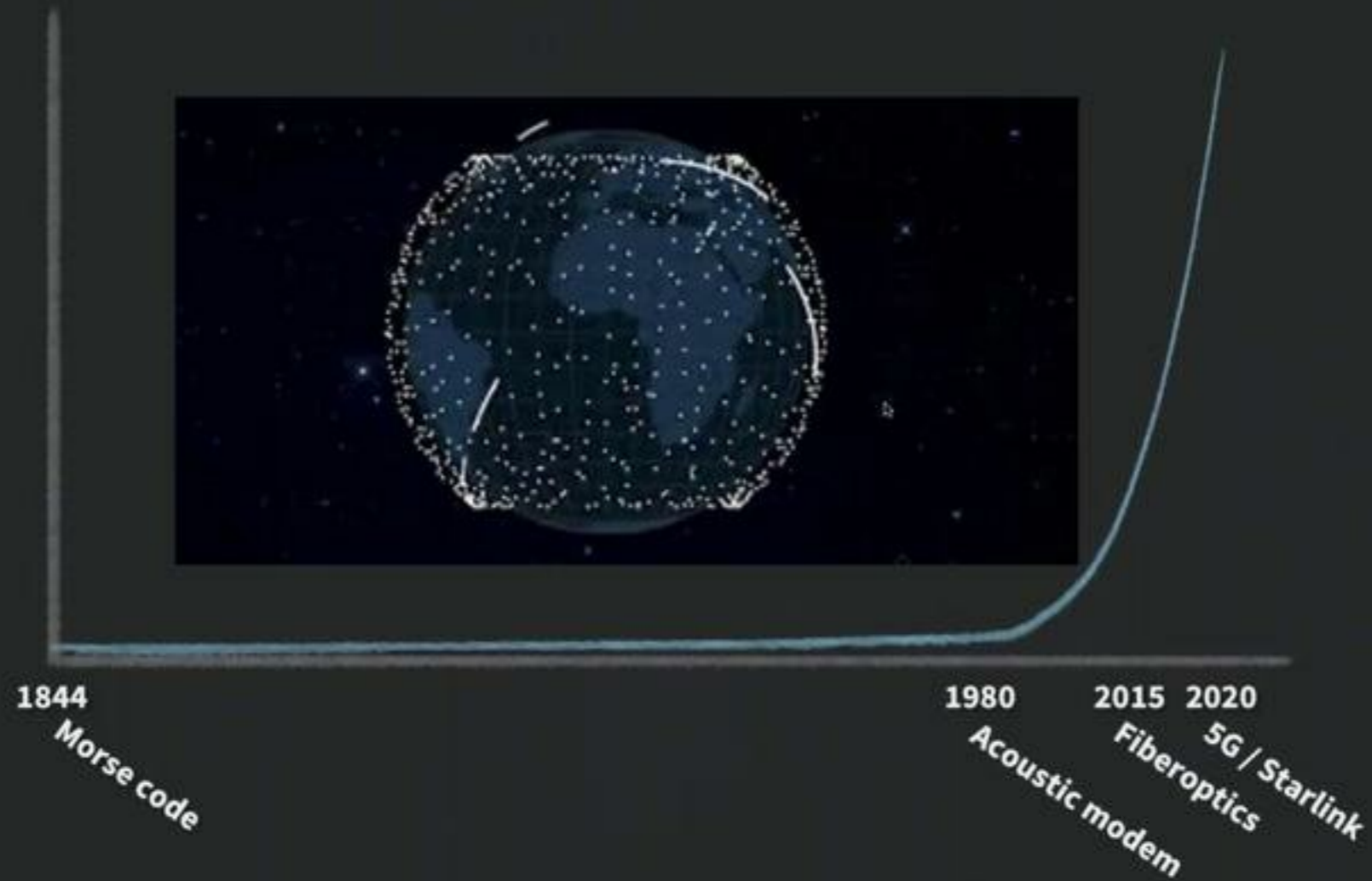
Communication speed through time



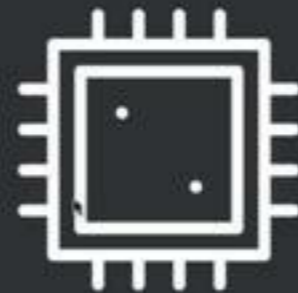
Communication speed through time



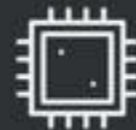
Communication speed through time



Exponential technologies



Exponential technologies



0
0 1
01 00
010111
1111000
0000110

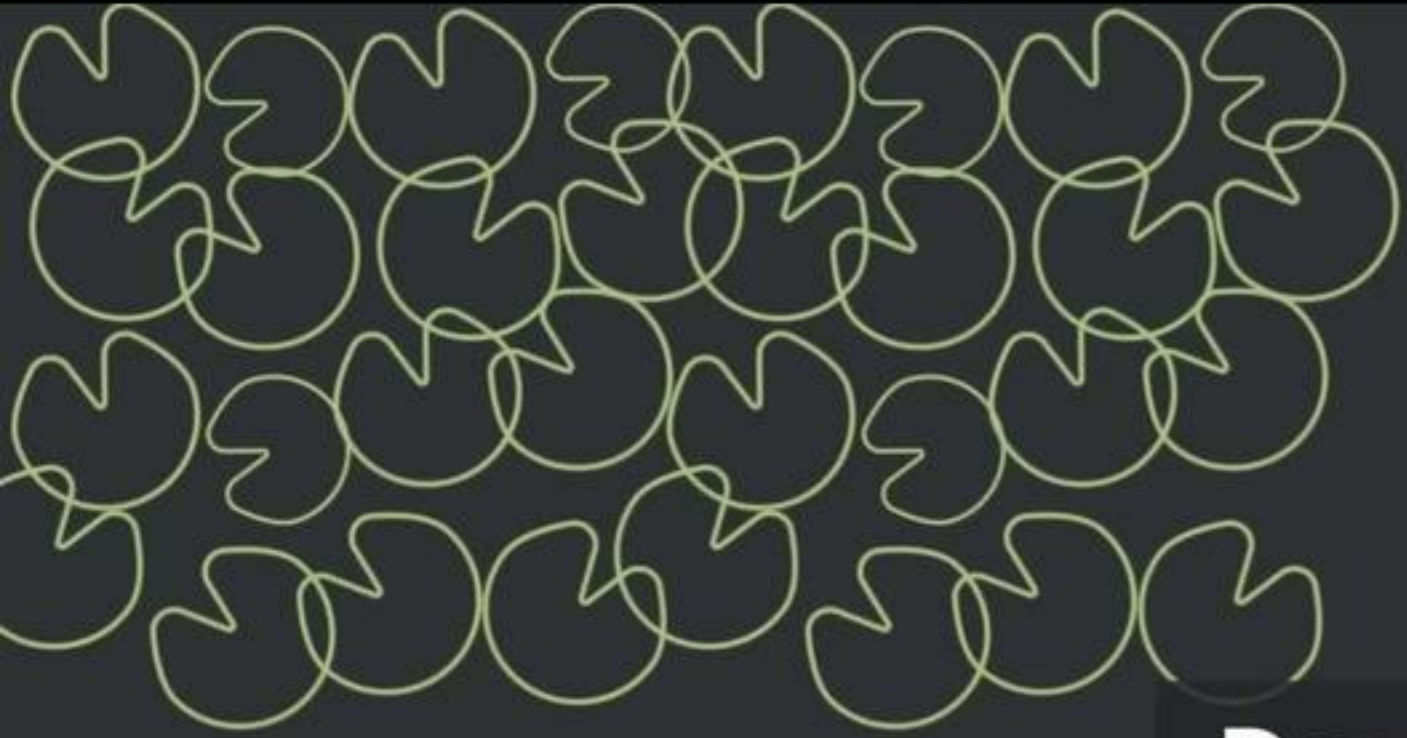
ai



Day 1



Day 5



Day 6



Day 7



Day 8





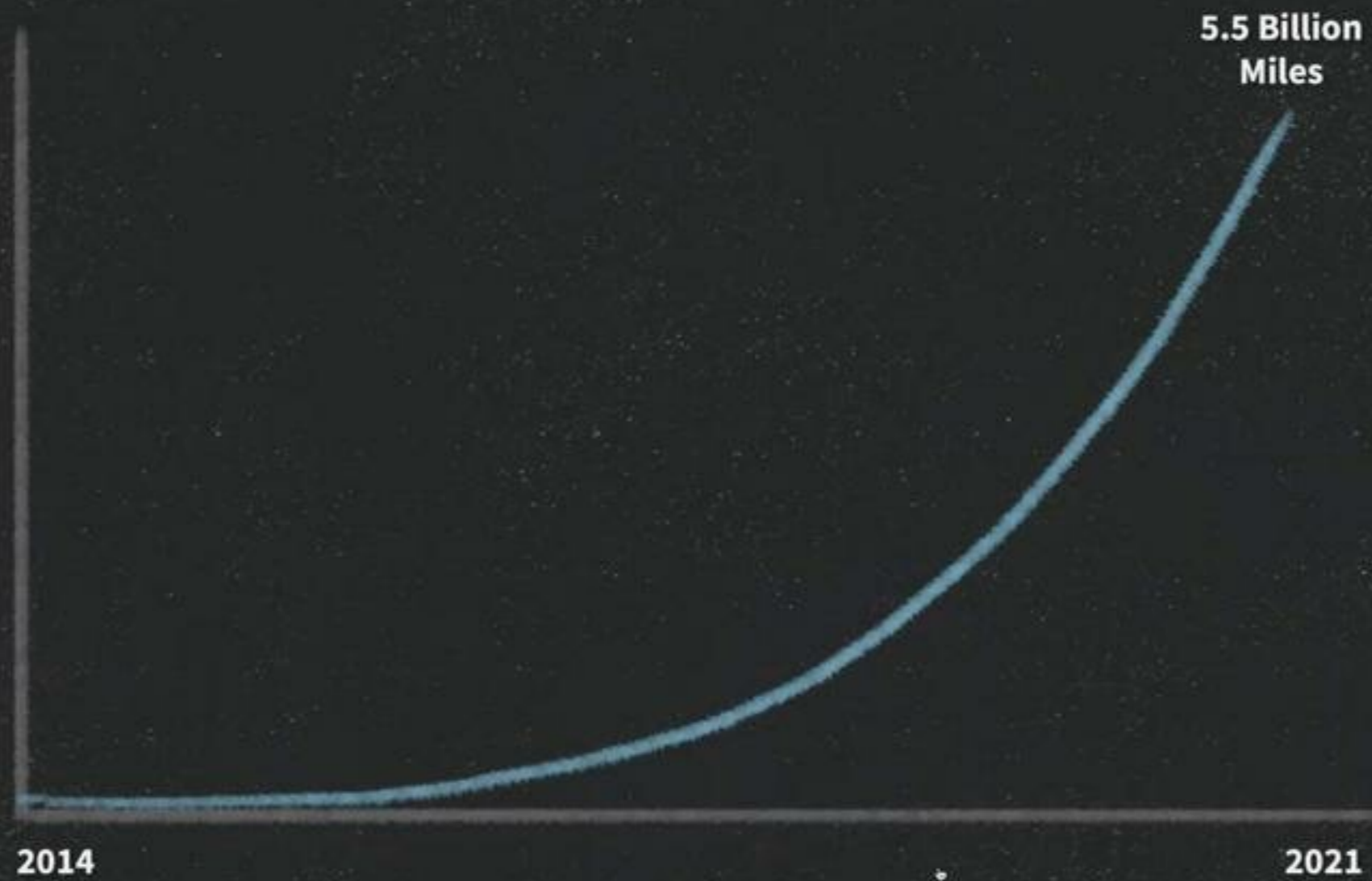
LEFT REARWARD VEHICLE CAMERA



MEDIUM RANGE VEHICLE CAMERA



Tesla autonomous miles



Uber

lyft

G



G



DIY home renovation

SNL skit cowbell



2021 trends



USER_00948



USER_00948

Masters' programs near me

New mother

How to grow tomatoes

G



USER_00948



G

FW: dad's bday

"Hey Google, play jazz!"

RE: new position offer



USER_00948

Masters' programs near me

2021 trends

New mother

SNL skit cowbell

How to grow tomatoes

DIY home renovation

4th Industrial Revolution



1st

Mechanization,
water power,
steam power



2nd

Mass production,
assembly line,
electricity



3rd

Computer and
automation

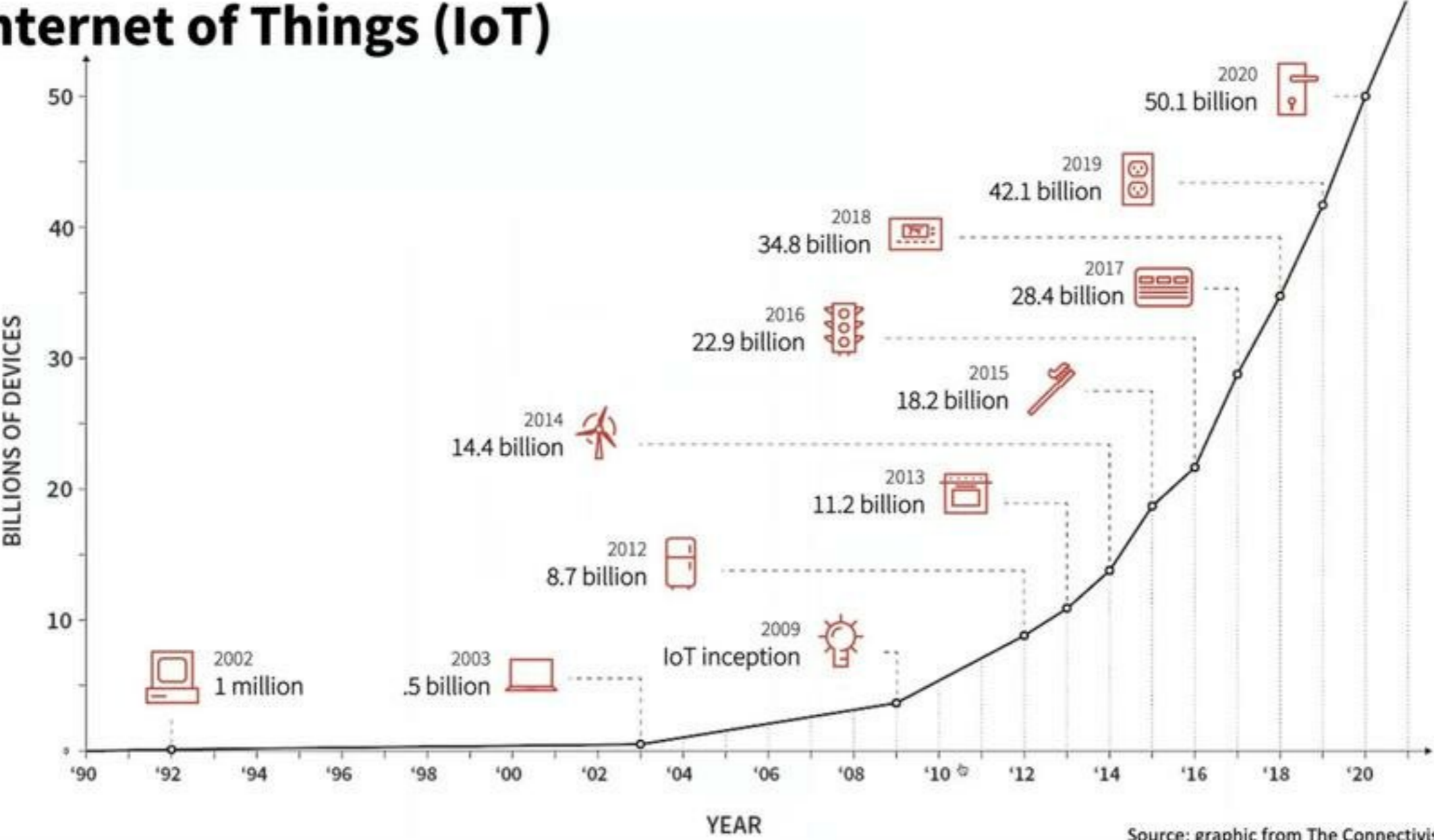


4th

Cyber Physical
Systems

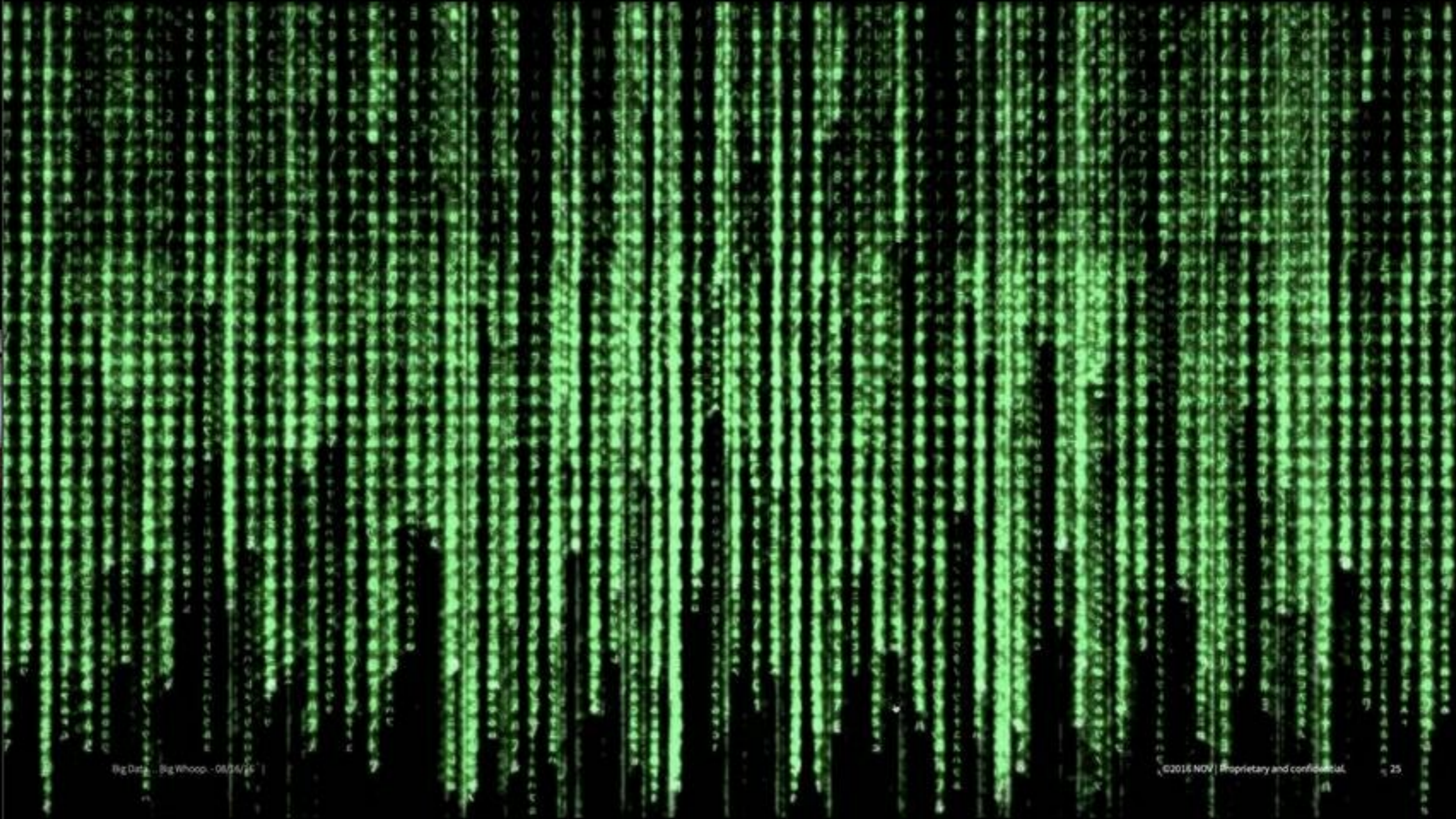


Internet of Things (IoT)



Source: graphic from The Connectivist, data from CISCO

Big Data...Big Whoop





7909 Parkwood Circle
Houston, TX 77036

Dear Customer,

Your regulator valve is
going to fail in 18 days.
Spare part enclosed.

Love, NOV

Condition Monitoring / Condition Based Maintenance

Levels of maintenance



Time based



Usage based

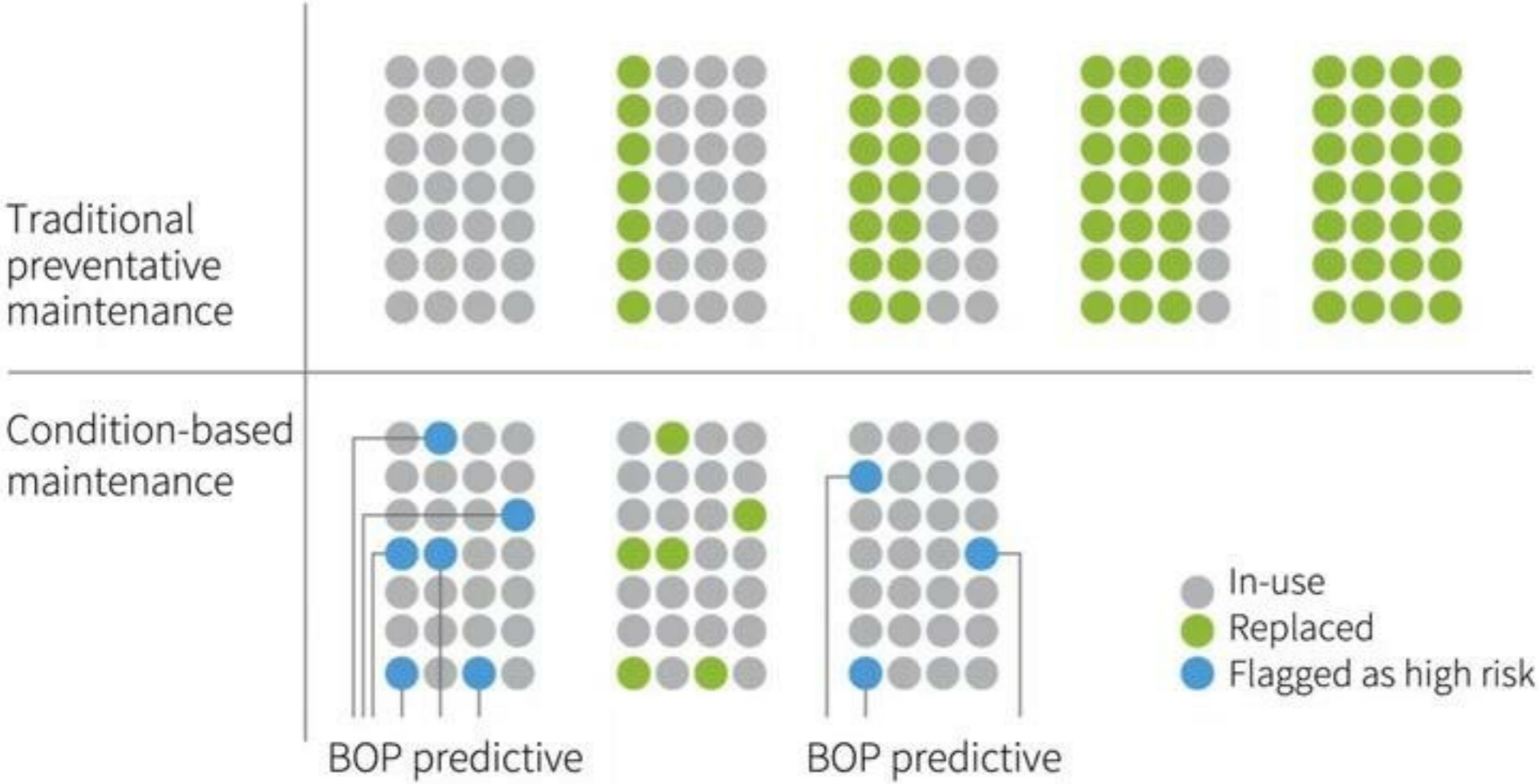


Condition based



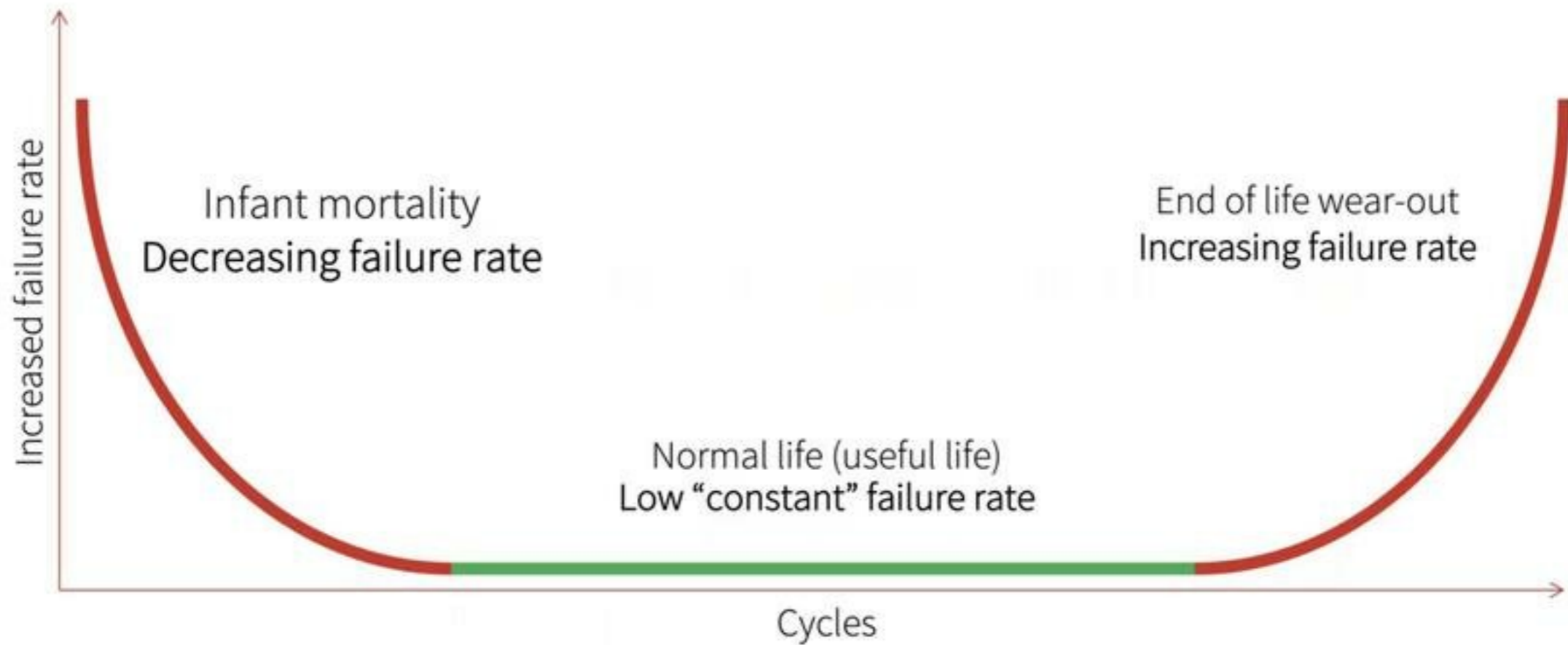
Asset performance management
BOP regulator valve

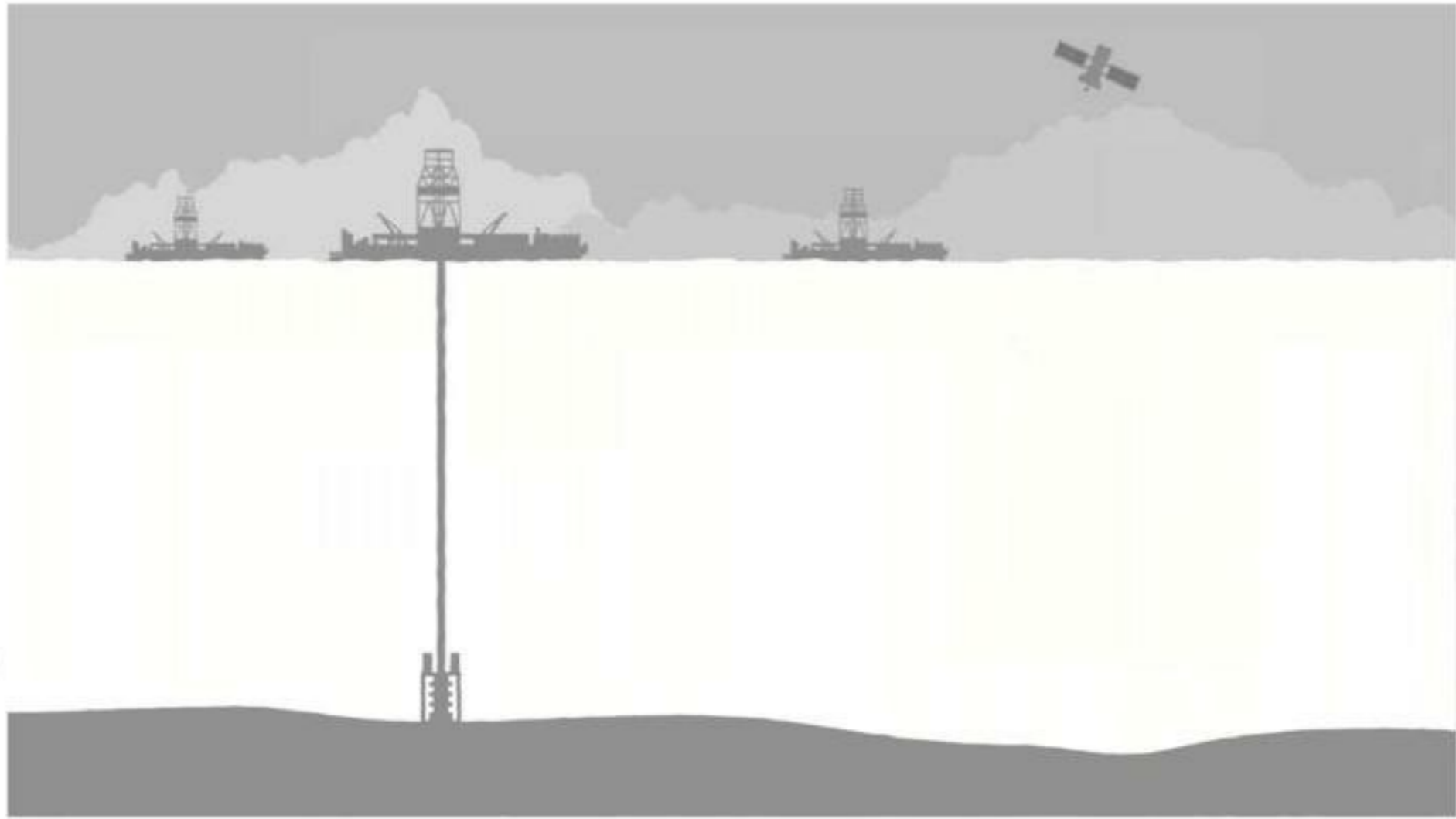
Traditional v. condition-based maintenance



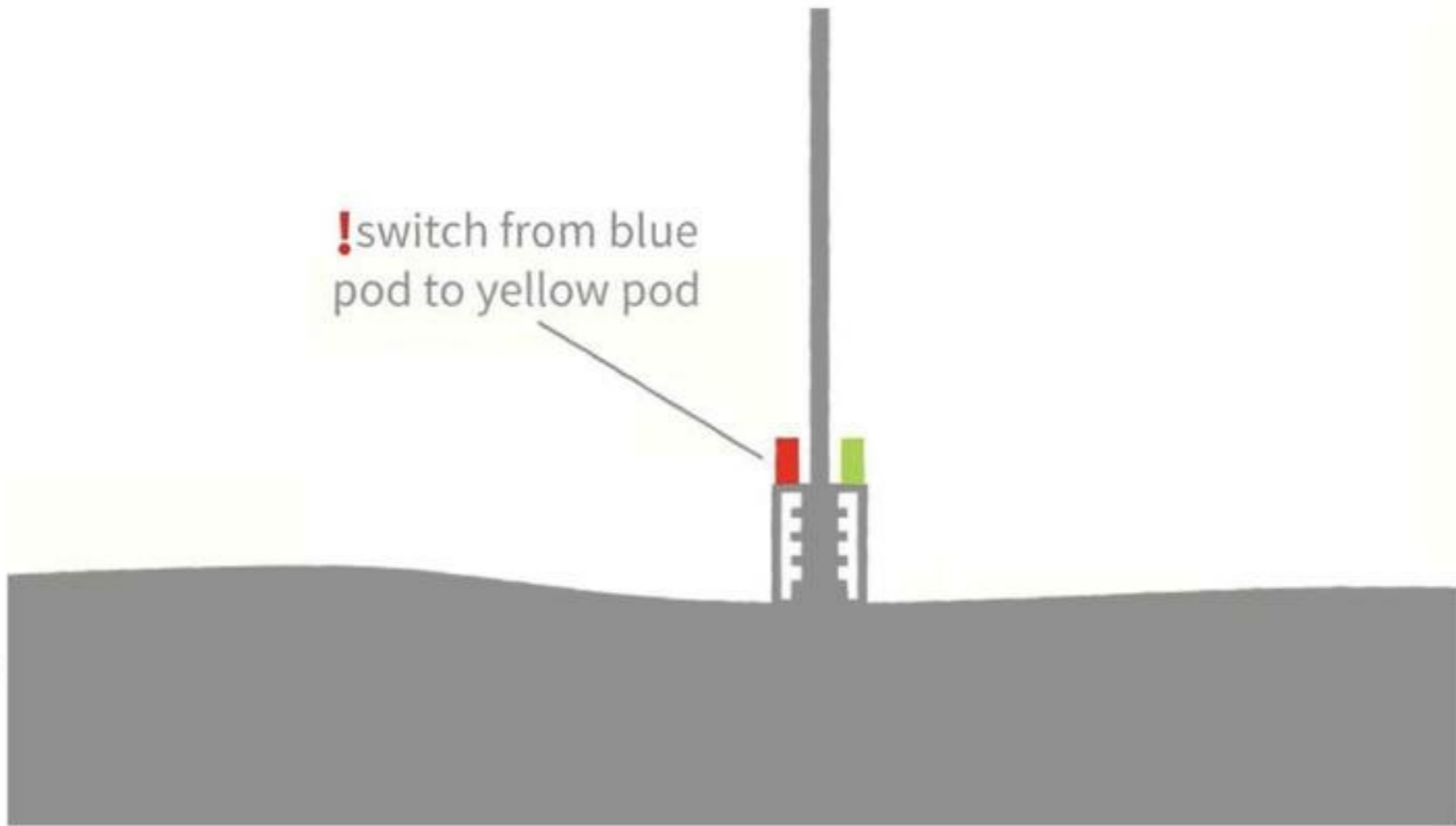
Condition-based maintenance: the bathtub curve

Hypothetical failure rate versus time

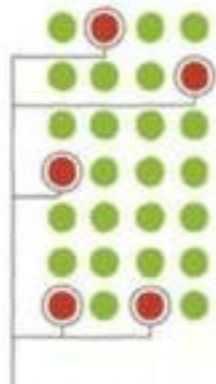




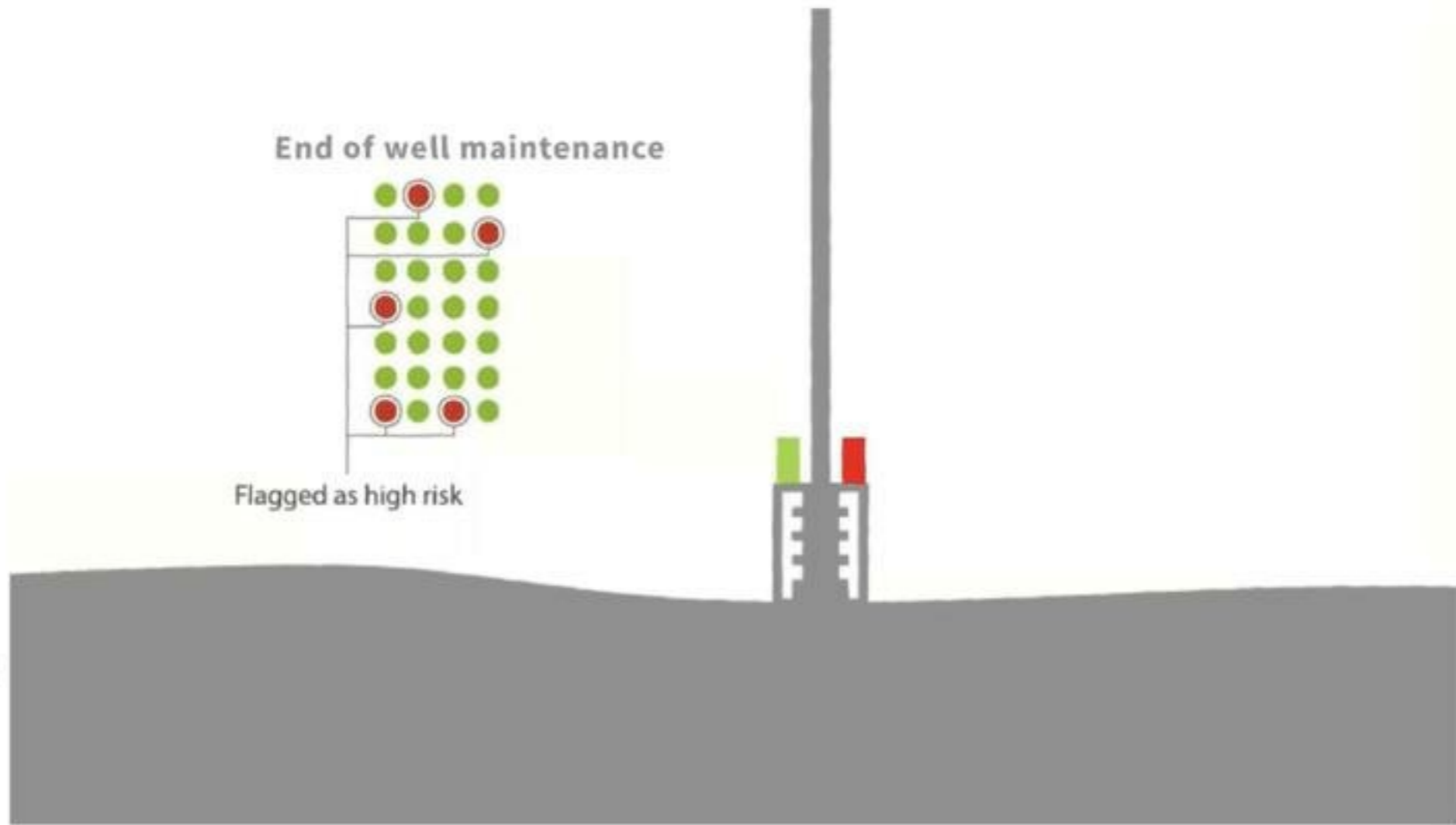
!switch from blue pod to yellow pod



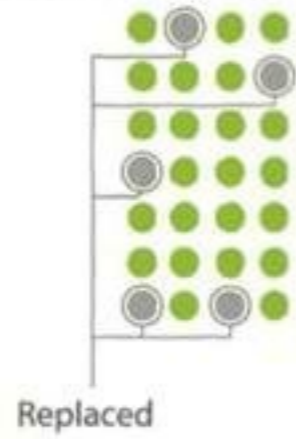
End of well maintenance



Flagged as high risk



End of well maintenance



1

Less thing to worry about



NOV

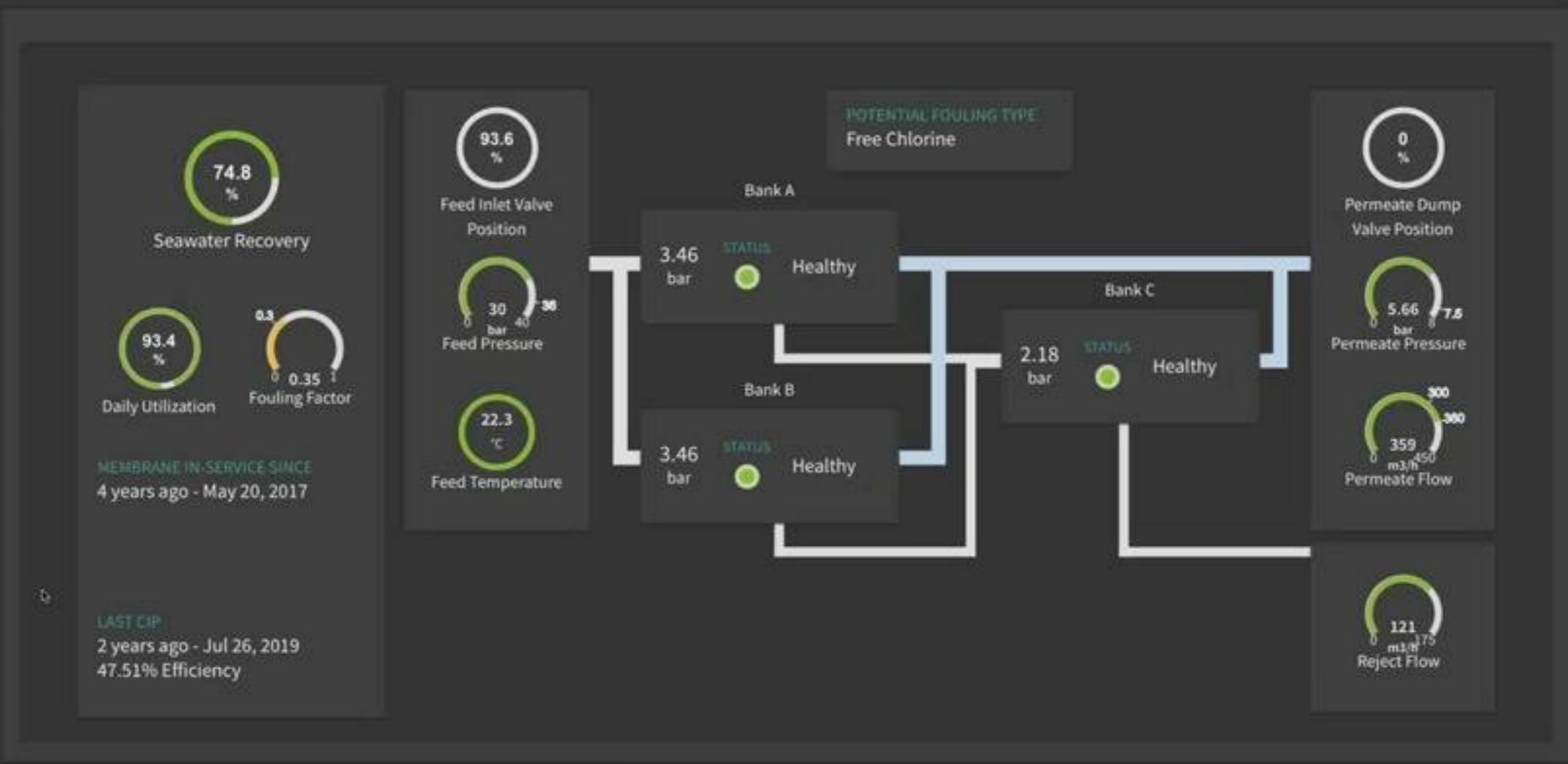
Enhanced Products



Sulphate removal unit

Trains

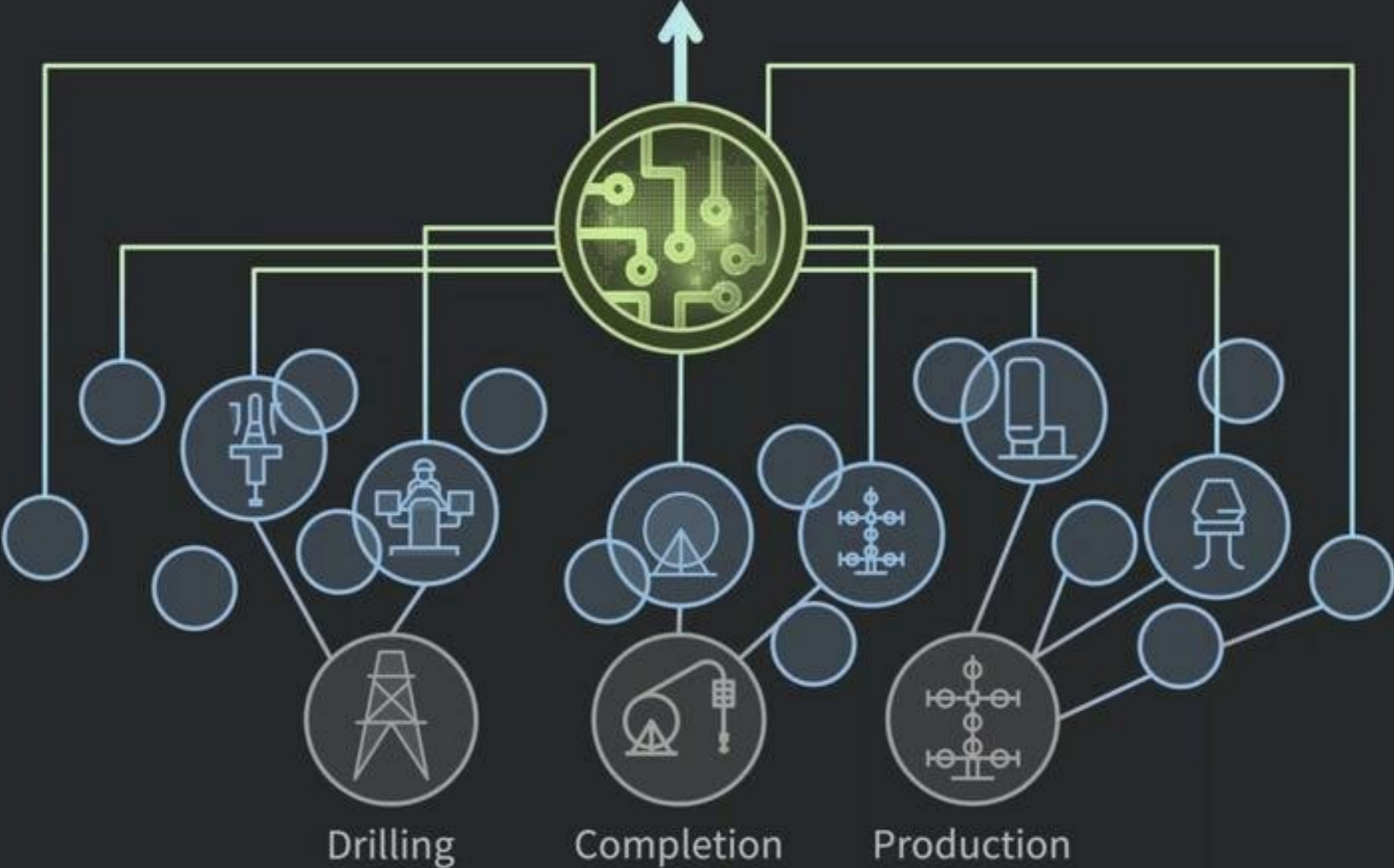
Train A ● Check Chlorine Scavenger Dosing Train B ● Check Chlorine Scavenger Dosing



Differential Pressure Last 6 Months

Fouling Factor Last 12 Months

Data spanning 300+ data sources



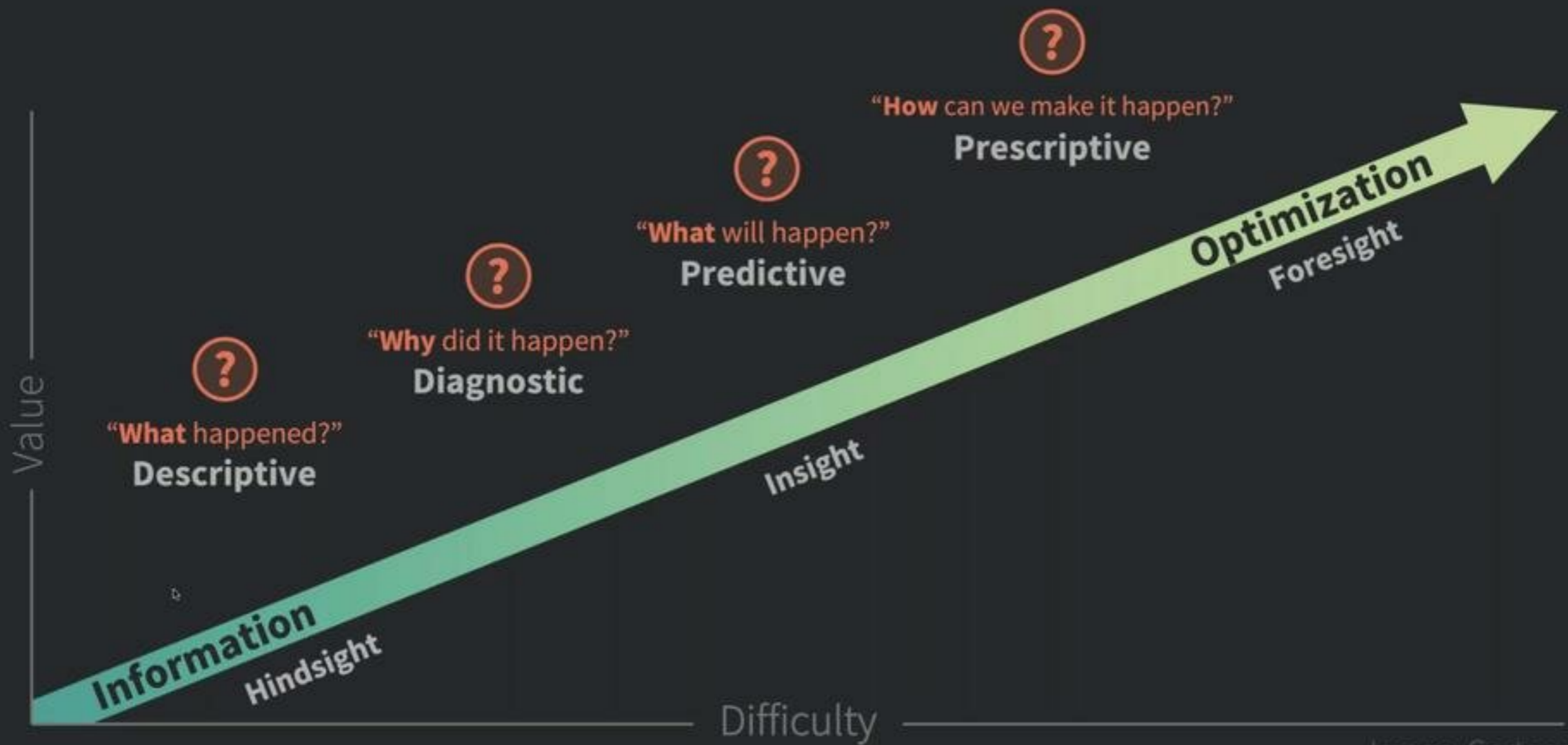


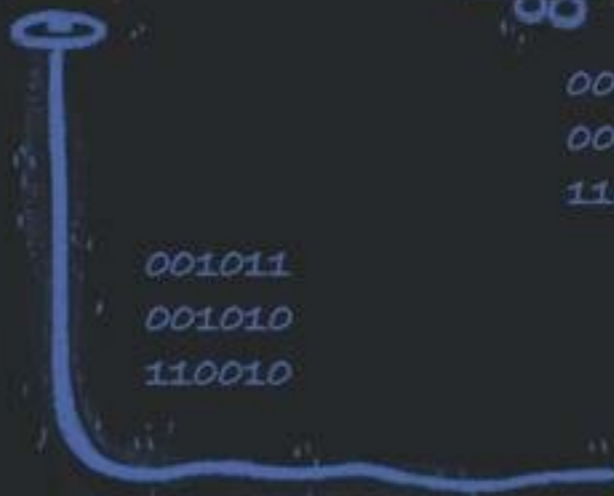
Image: Gartner



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Supply Chain

Transportation

Inventory

Resource Management

Asset Management

Performance Optimization

DAMA Presentation

Home Insert Draw Design Transitions Animations Slide Show Review View Recording Help

Source: Sales Pro - 22

Format Background

- Fill
- Solid fill
- Gradient fill
- Picture or texture fill
- Pattern fill
- Hide Background Graphics

Color: [Color picker]

Transparency: [Slider]

Asset performance management BOP regulator valve

Used to be too difficult and too expensive to touch big data. Now with emergence of [data science](#) software tools, the barrier of entry is lower.

Who are our greatest threats?

Slide 29 of 42 English (United States) Accessibility: Investigate

Notes Comments [Navigation icons] 100%

- Spreadsheets
- Max Client New Story Outline.pptx
- Macintosh HD
- Work
- Baker-DEMO.pptx
- USS-Discovery
- Working
- Max Platform Evolution.pptx
- Documents
- Temp
- WSA_MVP_Builds_For_Fin...als.pptx
- Images
- C1 Export
- PDF Documents
- Photo Work
- March-23-recordin...ker.mp4
- Presentations
- DAMA Presentation.pptx
- NOV MAX - Bathub.pptx
- NOV Max Edge Not Created Equal.pptx
- 21 05 06 Max Commer...fy.pptx
- NOV Max Edge.pptx

Big Data...Big Whoop

```
Int64Index: 509145 entries, 0 to 509144
Data columns (total 3 columns):
tagname    509145 non-null object
datetime  509145 non-null datetime64[ns]
tagvalue   509145 non-null object
dtypes: datetime64[ns](1), object(2)
memory usage: 17.4+ MB
```

	tagname	datetime	tagvalue		tagname	datetime	tagvalue
0	B_COND_PRES	2014-10-22 00:00:00	4955.00000000000000000000	70	B_COND_PRES	2014-10-22 00:03:21	4953.00000000000000000000
1	B_COND_PRES	2014-10-22 00:00:02	4954.00000000000000000000	71	B_COND_PRES	2014-10-22 00:03:28	4960.00000000000000000000
2	B_COND_PRES	2014-10-22 00:00:04	4950.00000000000000000000	72	B_COND_PRES	2014-10-22 00:03:30	4956.00000000000000000000
3	B_COND_PRES	2014-10-22 00:00:07	4953.00000000000000000000	73	B_COND_PRES	2014-10-22 00:03:33	4957.00000000000000000000
4	B_COND_PRES	2014-10-22 00:00:09	4950.00000000000000000000	74	B_COND_PRES	2014-10-22 00:03:37	4956.00000000000000000000
5	B_COND_PRES	2014-10-22 00:00:12	4954.00000000000000000000	75	B_COND_PRES	2014-10-22 00:03:40	4954.00000000000000000000
6	B_COND_PRES	2014-10-22 00:00:14	4952.00000000000000000000	76	B_COND_PRES	2014-10-22 00:03:42	4957.00000000000000000000
7	B_COND_PRES	2014-10-22 00:00:16	4957.00000000000000000000	77	B_COND_PRES	2014-10-22 00:03:50	4955.00000000000000000000
8	B_COND_PRES	2014-10-22 00:00:21	4958.00000000000000000000	78	B_COND_PRES	2014-10-22 00:03:54	4957.00000000000000000000
9	B_COND_PRES	2014-10-22 00:00:24	4952.00000000000000000000	79	B_COND_PRES	2014-10-22 00:03:57	4954.00000000000000000000
10	B_COND_PRES	2014-10-22 00:00:26	4958.00000000000000000000	80	B_COND_PRES	2014-10-22 00:04:00	4955.00000000000000000000
11	B_COND_PRES	2014-10-22 00:00:28	4953.00000000000000000000	81	B_COND_PRES	2014-10-22 00:04:02	4958.00000000000000000000
12	B_COND_PRES	2014-10-22 00:00:31	4957.00000000000000000000	82	B_COND_PRES	2014-10-22 00:04:06	4954.00000000000000000000
13	B_COND_PRES	2014-10-22 00:00:41	4954.00000000000000000000	83	B_COND_PRES	2014-10-22 00:04:09	4954.00000000000000000000
14	B_COND_PRES	2014-10-22 00:00:43	4957.00000000000000000000	84	B_COND_PRES	2014-10-22 00:04:11	4956.00000000000000000000
15	B_COND_PRES	2014-10-22 00:00:46	4958.00000000000000000000	85	B_COND_PRES	2014-10-22 00:04:13	4957.00000000000000000000
16	B_COND_PRES	2014-10-22 00:00:48	4953.00000000000000000000	86	B_COND_PRES	2014-10-22 00:04:16	4952.00000000000000000000
17	B_COND_PRES	2014-10-22 00:00:50	4950.00000000000000000000	87	B_COND_PRES	2014-10-22 00:04:18	4962.00000000000000000000
18	B_COND_PRES	2014-10-22 00:00:52	4953.00000000000000000000	88	B_COND_PRES	2014-10-22 00:04:21	4953.00000000000000000000
19	B_COND_PRES	2014-10-22 00:00:55	4961.00000000000000000000	89	B_COND_PRES	2014-10-22 00:04:23	4949.00000000000000000000
20	B_COND_PRES	2014-10-22 00:00:57	4957.00000000000000000000	90	B_COND_PRES	2014-10-22 00:04:26	4960.00000000000000000000
21	B_COND_PRES	2014-10-22 00:01:00	4953.00000000000000000000	91	B_COND_PRES	2014-10-22 00:04:28	4957.00000000000000000000
22	B_COND_PRES	2014-10-22 00:01:02	4948.00000000000000000000	92	B_COND_PRES	2014-10-22 00:04:31	4959.00000000000000000000
23	B_COND_PRES	2014-10-22 00:01:05	4952.00000000000000000000	93	B_COND_PRES	2014-10-22 00:04:33	4957.00000000000000000000
24	B_COND_PRES	2014-10-22 00:01:07	4954.00000000000000000000	94	B_COND_PRES	2014-10-22 00:04:36	4958.00000000000000000000
25	B_COND_PRES	2014-10-22 00:01:09	4953.00000000000000000000	95	B_COND_PRES	2014-10-22 00:04:38	4960.00000000000000000000
26	B_COND_PRES	2014-10-22 00:01:14	4949.00000000000000000000	96	B_COND_PRES	2014-10-22 00:04:43	4949.00000000000000000000
27	B_COND_PRES	2014-10-22 00:01:16	4953.00000000000000000000	97	B_COND_PRES	2014-10-22 00:04:45	4953.00000000000000000000
28	B_COND_PRES	2014-10-22 00:01:19	4954.00000000000000000000	98	B_COND_PRES	2014-10-22 00:04:48	4961.00000000000000000000
29	B_COND_PRES	2014-10-22 00:01:21	4957.00000000000000000000	99	B_COND_PRES	2014-10-22 00:04:50	4957.00000000000000000000

G



USER_00948



USER_00948

New mother

DIY home renovation

SNL skit cowbell

RE: new position offer

How to grow tomatoes

"Hey Google, play jazz!"

FW: dad's bday

Masters' programs near me

2021 trends

DAMA Presentation

Home Insert Draw Design Transitions Animations Slide Show Review View Recording Tell me

Format Background

- Fill
- Solid fill
- Gradient fill
- Picture or texture fill
- Pattern fill
- Hide Background Graphics
- Color
- Transparency 0%

Apply to All Reset Background

Questions?

Click to add notes

Slide 41 of 42 English (United States) Accessibility: Investigate

- Photo Work
- Macintosh HD
- US5-Discovery
- Documents
- Images
- PDF Documents
- March-23-recordin...ker.mp4
- Presentations
- Spreadsheets
- Work
- Working
- Temp
- CI Export

Microsoft Office Home

Search Design

Search Suggestions

- aveva soft
- aveva software
- aveva software support
- aveva software lake forest ca
- aveva software developer salary
- aveva software stock

Start Page

Format Background

Fill

- Solid fill
- Gradient fill
- Picture or texture fill
- Pattern fill
- Hide Background Graphics

Color

Transparency 25%

Apply to All Reset Background

Home

Insert

Font

Paragraph

Layout

34

35

36

37

38

39

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41

42

Slide 41 of 42

Photo Work

Macintosh HD

USB-Disclosure

Documents

Images

PDF Documents

March-23-recordin...ker.mpeg

Presentations

Spreadsheets

Work

Working

Temp

CI Export

The screenshot shows the AVEVA website in a Safari browser window. The browser's address bar displays 'aveva.com'. The website's navigation bar includes 'Investors', 'Partners', 'Education', 'Training', 'Support', and 'Contact Us'. The main header features the AVEVA logo and a search icon. A dropdown menu for 'Industries' is open, listing the following sectors: Chemicals, Energy, Food and Beverage, CPG, Infrastructure (highlighted), Manufacturing, Marine, Mining, Power and Utilities, and Water and Wastewater. The main content area has a dark background with a photograph of two people. The text reads: 'AVEVA's commitment to action' and 'AVEVA's leading industrial software, together with OGSuff's world-class operational data management, empowers the people behind industries to engineer smarter, operate better and drive sustainable efficiency.' A 'Learn More' button is visible. At the bottom, a cookie consent banner is displayed with 'Accept' and 'Decline' buttons.

The screenshot shows a 'Format Background' panel from a design application. The panel title is 'Format Background'. Under the 'Fill' section, the following options are listed: Solid fill, Gradient fill, Picture or texture fill, and Pattern fill. The 'Color' property is set to a dark blue, and the 'Transparency' is set to 25%. At the bottom of the panel, there are 'Apply to All' and 'Reset Background' buttons.

The screenshot shows a Mac desktop environment with a purple background. The desktop contains several folders and files: 'Photo Work', 'Macintosh HD', 'USS-Discovery', 'Documents', 'Images', 'PDF Documents', 'March-23-recordin..._kar.mpd', 'Presentations', 'Spreadsheets', 'Work', 'Working', 'Temp', and 'C1 Export'. The system status bar at the top right shows the date and time as 'Tue Aug 17 5:28 PM'.

aveva.com

Microsoft Office Home Mail - Feltes, Carl - Outlook SPE-207291-M3_Book Software Solutions For Chemical Industry | AVEVA

Investors Partners Education Training Support Contact Us

AVEVA Industries Offerings Resources About Us

Home > Industries > Chemicals


Digital twins powered by AI and cloud help improve chemical processes and operations, driving sustainability and safety

Covestro, Evonik, Cranfield University, and AVEVA joined the panel discussion about how process simulation can drive sustainability in Chemicals. In another webinar, BASF presented how virtual reality is used in their operator training program.

[Watch the panel discussion](#) [Learn How BASF Trains Plant Staff](#)

Maximize Value & Sustainability in Chemicals

The top 15 global chemical companies rely on AVEVA to actively drive value & sustainability. We help you accelerate digital transformation to increase your competitive advantage while reaching ESG targets.



This website stores cookies on your computer. These cookies are used to collect information about how you interact with our website and allow us to remember you. We use this information in order to improve and customize your browsing experience and for analytics and metrics about our visitors both on this website and other media. To find out more about the cookies we use, see our [cookie policy](#).

If you decline, your information won't be tracked when you visit this website. A single cookie will be used in your browser to remember your preference not to be tracked.

Hi there! Please chat if you would like assistance.

Accept

Format Background

Fill

- Solid fill
- Gradient fill
- Picture or texture fill
- Pattern fill
- Hide Background Graphics

Color

Transparency 100%

Apply to All Reset Background

- Photo Work
- Macintosh HD
- US5-Discovery
- Documents
- Images
- PDF Documents
- March-23-recordin..._kar.mp4
- Presentations
- Spreadsheets
- Work
- Working
- Temp
- CT Export

aveva.com DAMA Presentation

Home Insert Draw Design Transitions Animations Slide Show Review View Recording Tell me

Format Background

- Fill
 - Solid fill
 - Gradient fill
 - Picture or texture fill
 - Pattern fill
 - Hide Background Graphics

Color [dropdown]

Transparency [slider] 0%

Apply to All Reset Background

Questions?

Click to add notes

Slide 41 of 42 English (United States) Accessibility: Investigate

Information is used to improve and customize your browsing experience and for analytics and marketing about our website and other products. To find out more about the cookies we use, see our [cookie policy](#).

If you decline, your information won't be tracked when you visit this website. A single cookie will be used to remember your preference not to be tracked.

Hi there! Please chat if you would like assistance.

Accept

- Photo Work
- Macintosh HD
- US5-Discovery
- Documents
- Images
- PDF Documents
- March-23-recordin...ker.mp4
- Presentations
- Spreadsheets
- Work
- Working
- Temp
- CT Expert


aveva.com

DAMA Presentation

Home Insert Draw Design Transitions Animations Slide Show Review View Recording Tell me

Source Sans Pro 32

Exponential technologies



Click to add notes

Slide 5 of 42 English (United States) Accessibility: Investigate

If you decline, your information won't be tracked when you visit this website. A single cookie will be used in your browser to remember your preference not to be tracked.

Hi there! Please chat if you would like assistance.

Accept

- Photo Work
- Macintosh HD
- US5-Discovery
- Documents
- Images
- PDF Documents
- March-23-recordin...ker.mp4
- Presentations
- Spreadsheets
- Work
- Working
- Temp
- CT Export

AutoSave DAMA Presentation

Home Insert Draw Design Transitions Animations Slide Show Review View Recording Tell me

Source Sans Pro 32

Exponential technologies

Click to add notes

Slide 1 of 42 English (United States) Accessibility: Investigate

information in order to improve and customize your browsing experience and for analytics and marketing about our visitors both on this website and other media. To find out more about the cookies we use, see our [privacy policy](#).

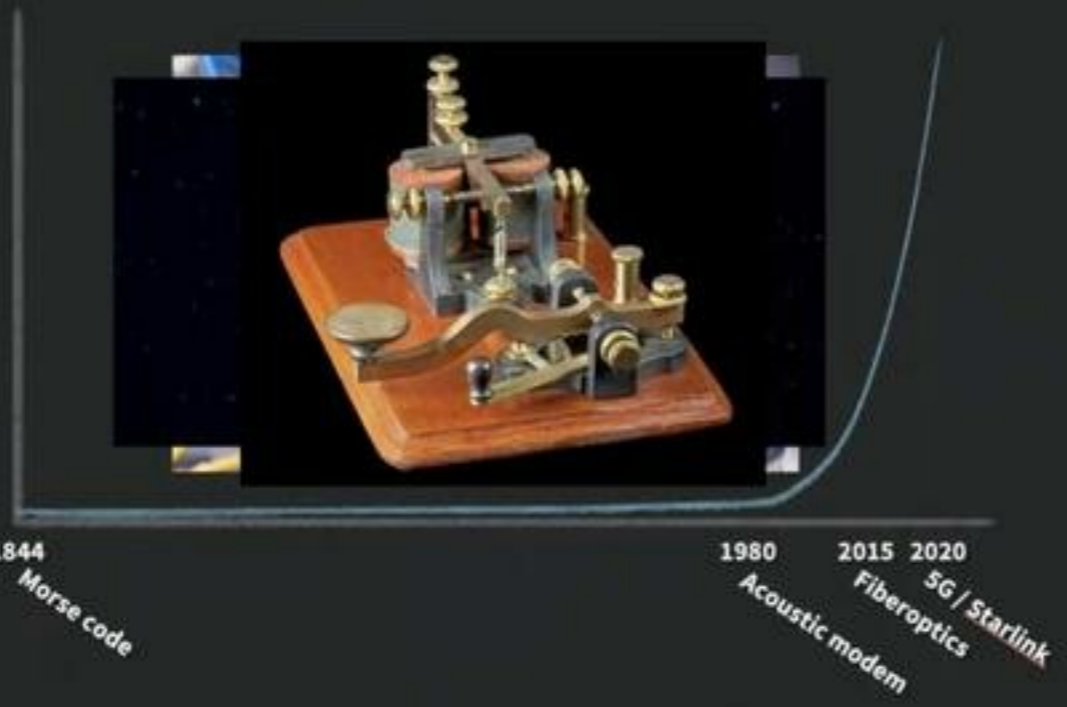
If you decline, your information won't be tracked when you visit this website. A single cookie will be used in your browser to remember your preference not to be tracked.

Hi there! Please chat if you would like assistance.

Accept

- Photo Work
- Macintosh HD
- US5-Discovery
- Documents
- Images
- PDF Documents
- March-23-recordin...ker.mp4
- Presentations
- Spreadsheets
- Work
- Working
- Temp
- CT Export

Communication speed through time



PowerPoint interface showing the slide content and navigation controls. The slide title is "Communication speed through time". The slide content includes a graph showing the evolution of communication technology from 1844 to 2020, with key milestones marked: 1844 Morse code, 1980 Acoustic modem, 2015 Fiberoptics, and 2020 5G / Starlink. A central image shows a mechanical telegraph device.

Microsoft Edge browser interface showing a privacy notice and a chatbot prompt. The privacy notice states: "Microsoft groups to improve and personalize your advertising experience and to provide our services with the products, services, and other tools we offer on our sites." The chatbot prompt asks: "Hi there! Please chat if you would like assistance." There is an "Accept" button and a chatbot icon.