Innovation and the Drive of Human Productivity

All Things M365

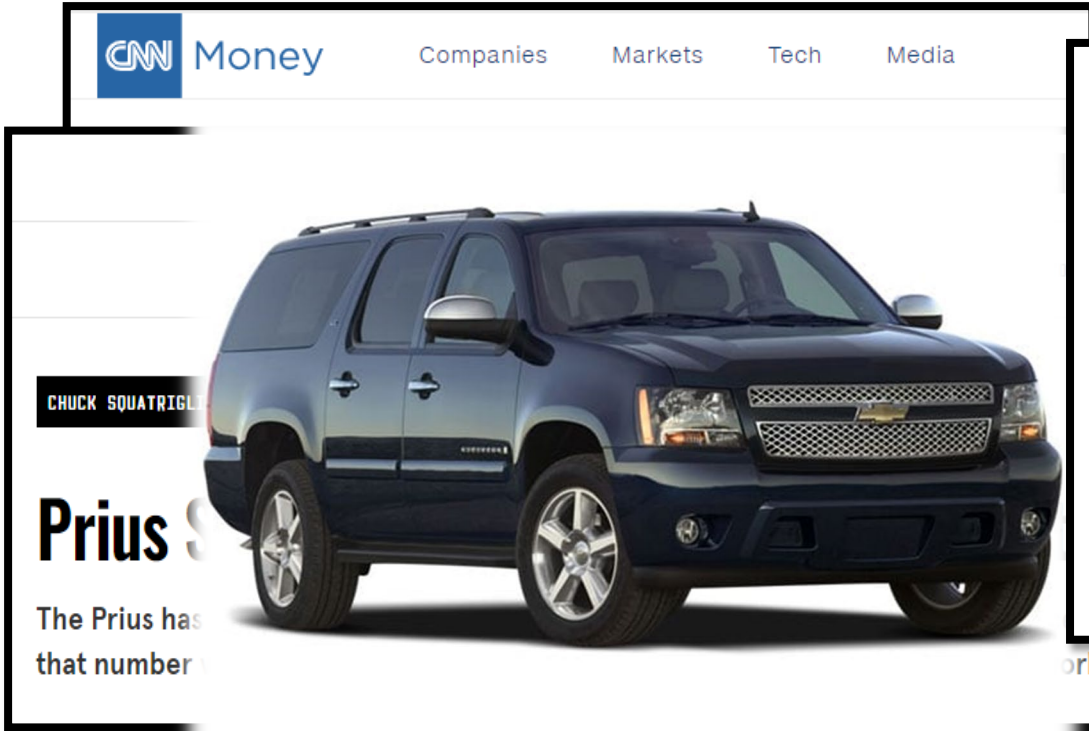*May 15*, 2024

Keith Briggs

Enterprise Architecture & Innovation Director

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Innovation Itself Becomes the Catalyst

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Influence of Need
Need Drives Change
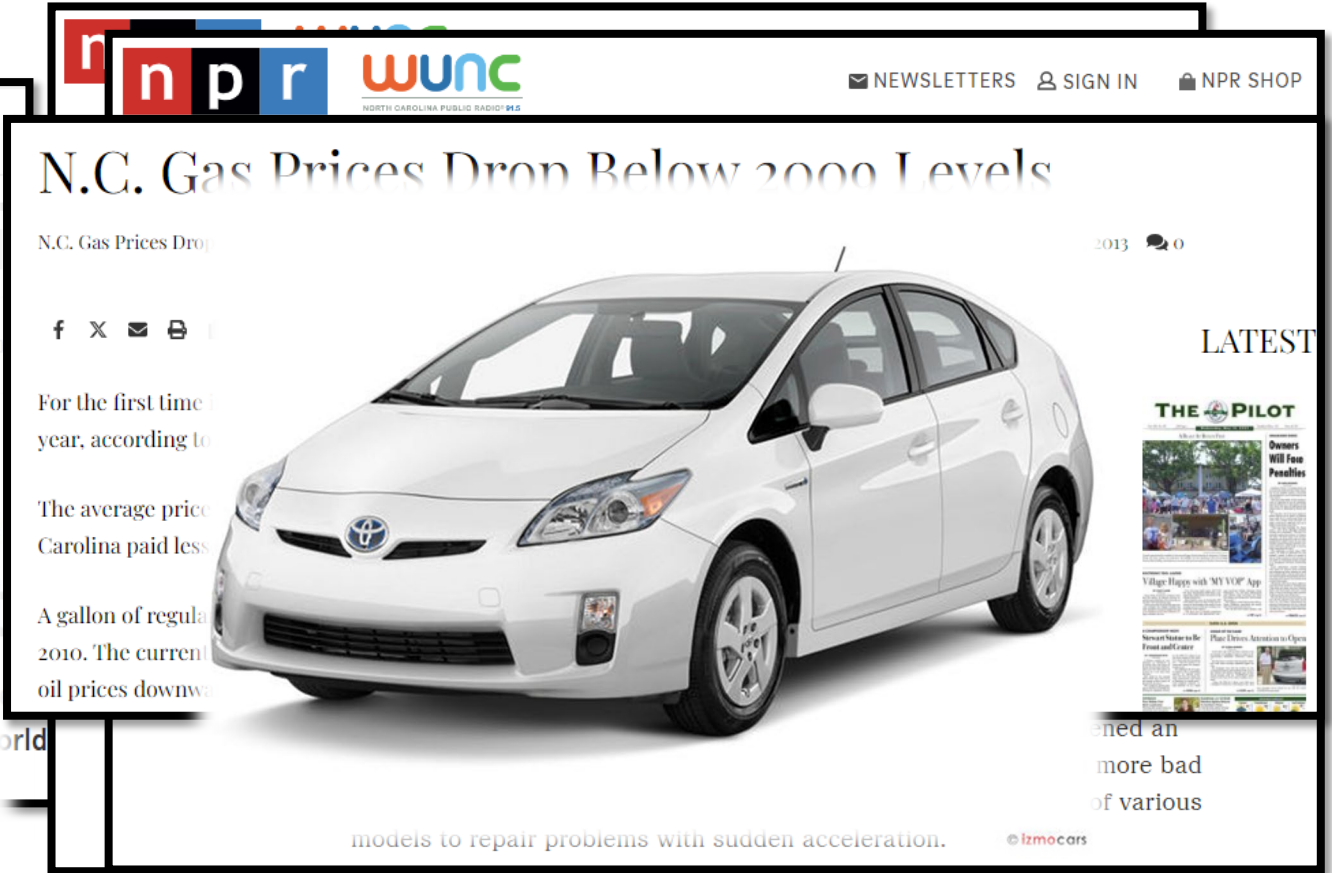
2008

2010

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Innovation and Human Productivity

Advancements in technology, processes, and mindset propel us towards greater efficiency, effectiveness, and success. This conversation delves into the ways in which innovation inspires creativity, fosters collaboration, and empowers individuals and organizations to achieve more, pushing our boundaries of what is achievable. Through our dynamic interplay of ingenuity and adaptation, innovation becomes the catalyst that fuels our relentless pursuit of productivity, ultimately shaping a future where possibilities are limitless, and achievements are boundless **– Prompt Generated through AI**
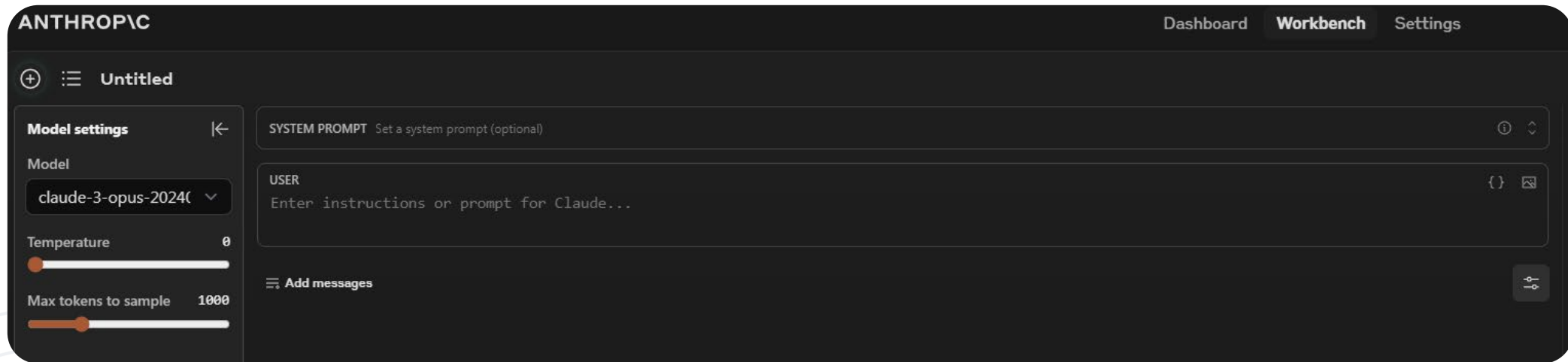
Greatest Thing Since Sliced Bread
Epitome of Innovation? After 14,000 years, why?
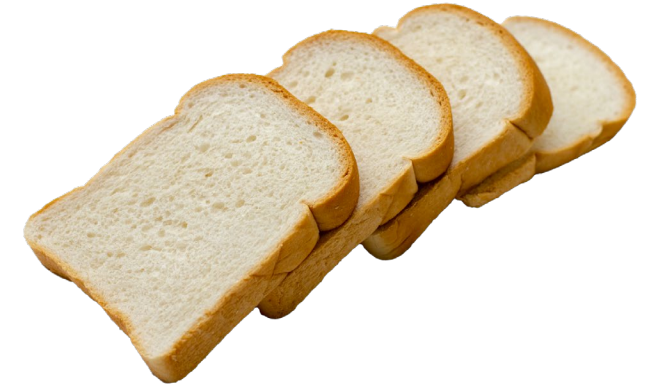
Revolutionized Convenience - Revolutionized consumption

Standardization of Quality - Introduced a level of consistency and quality control

Increased Hygiene - Introduced hygienic packaging that protected the bread from contamination and prolonged its shelf life. This innovation addressed concerns about food safety and hygiene, particularly in urban areas where bread was often handled by multiple people before reaching consumers (Challenges foster new innovations)

Widespread Adoption – First introduced in 1928, sliced bread became so common-place in American households that during a 1943 wartime conservation effort, sliced bread was banned creating a nationwide crisis. The ban, so unpopular, was quickly lifted after just two months

Cultural Impact - Sliced bread became ingrained in popular culture as a symbol of modernity and progress. Its widespread acceptance and adoption reflected society's embrace of technological advancements and innovations that improve everyday life

Influence on Other Industries -The success of sliced bread served as a model for innovation in other industries, inspiring manufacturers to develop new products that prioritize convenience and consumer satisfaction

Overall, sliced bread is considered one of the most innovative ideas because it transformed a staple food item into a convenient, standardized product that revolutionized the way people consumed bread
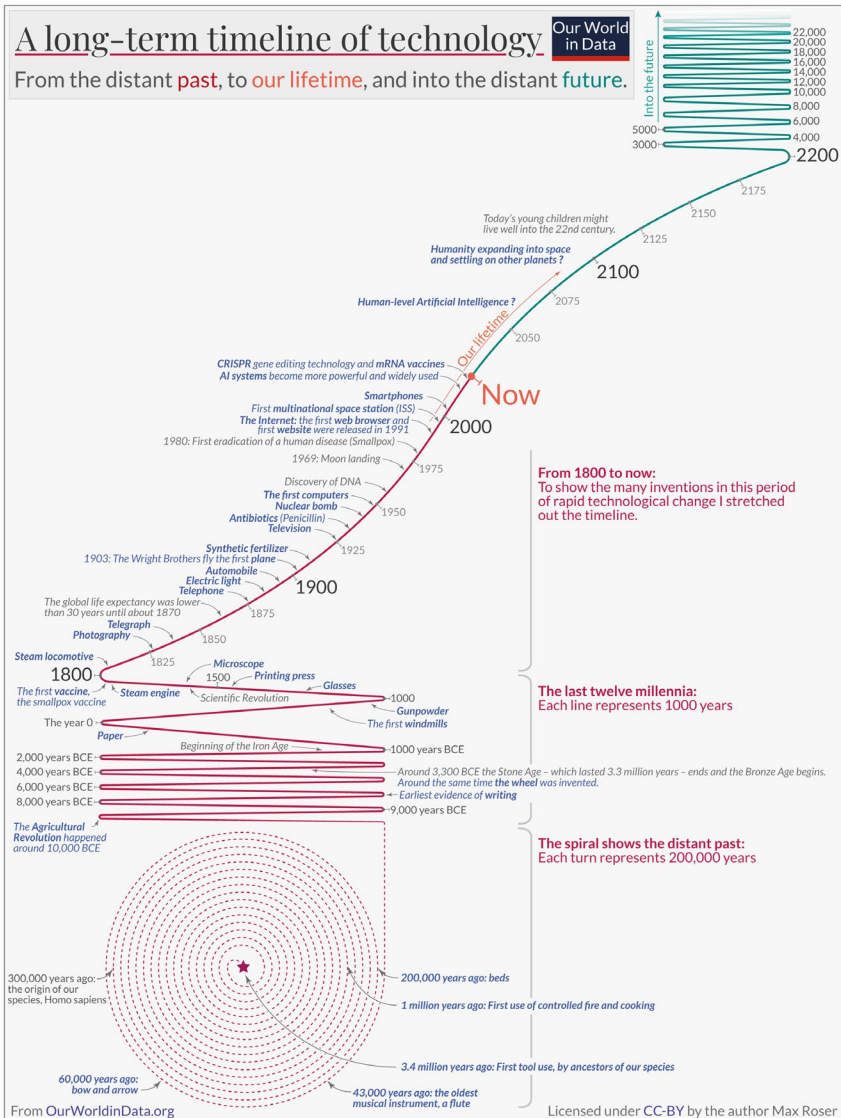
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Influence of Innovation
Driving Demand

Advancements in Technology
The Engine of Progress

A long-term timeline of technology
Our World in Data

From the distant past, to our lifetime, and into the distant future.

Into the future

22,000
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2200

5000
3000

Today's young children might live well into the 22nd century.

2175
2150
2125
2100
2075
2050

Humanity expanding into space and settling on other planets?

Human-level Artificial Intelligence?

Our lifetime

CRISPR gene editing technology and mRNA vaccines
AI systems become more powerful and widely used

Now

Smartphones
First multinational space station (ISS)
The Internet: the first web browser and first website were released in 1991
1980: First eradication of a human disease (Smallpox)
2000
1969: Moon landing
1975
Discovery of DNA
The first computers
Nuclear bomb
Antibiotics (Penicillin)
Television
1950
Synthetic fertilizer
1903: The Wright Brothers fly the first plane
1925
Automobile
Electric light
Telephone
1900
The global life expectancy was lower than 30 years until about 1870
1875
Telegraph
Photography
1850
Steam locomotive
1825
1800
Microscope
1500 Printing press
The first vaccine, the smallpox vaccine
Steam engine   Scientific Revolution   Glasses
The year 0
1000
Gunpowder
The first windmills
Paper
Beginning of the Iron Age
2,000 years BCE
1000 years BCE
4,000 years BCE
Around 3,300 BCE the Stone Age – which lasted 3.3 million years – ends and the Bronze Age begins.
6,000 years BCE
Around the same time the wheel was invented.
8,000 years BCE
Earliest evidence of writing
9,000 years BCE
The Agricultural Revolution happened around 10,000 BCE

From 1800 to now:
To show the many inventions in this period of rapid technological change I stretched out the timeline.

The last twelve millennia:
Each line represents 1000 years

The spiral shows the distant past:
Each turn represents 200,000 years

300,000 years ago: the origin of our species, Homo sapiens
200,000 years ago: beds
1 million years ago: First use of controlled fire and cooking
3.4 million years ago: First tool use, by ancestors of our species
60,000 years ago: bow and arrow
43,000 years ago: the oldest musical instrument, a flute

From OurWorldinData.org
Licensed under CC-BY by the author Max Roser

Technology advancement refers to the **development and improvement** of tools, machines, and systems that enable humans **to accomplish tasks more efficiently** or effectively

Innovation is considered a **driving force** behind progress and growth

Innovation can **drive further innovation** by sparking competition, encouraging continuous improvement, and the development of new products and services

200 Years ago – Steam engine
1,000 Years ago - Gunpower
10K Years ago – Agriculture
200K Years ago – Creation of a "bed"
1 Million Years ago – Controlled use of fire
3.4 Million Years ago – First known Tool use by humanoid species

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Cultivating a Progressive Mindset
Fostering Innovation Culture

Culture can play a significant role in innovation by **influencing the behavior** of individuals within an organization. A culture that **values change, experimentation, and risk-taking** can **foster innovation** and **increase productivity**, while a culture that resists change and prefers to maintain the status quo is less likely to do so

Known Innovative Workplace Cultures

Apple – Strive for perfection

Pixar – Culture of listening, receiving feedback to grow (Creativity Inc.)

Microsoft – Fosters creativity through continuous learning

P&G – Creativity is a daily operation

Tesla – Constantly seek supreme ideas

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Empowering Individuals and Organizations
The Human Element of Innovation

Employees should feel **comfortable sharing** their own ideas, and they should also be **willing to consider** the ideas of others

Openness is essential for fostering an environment where innovation can flourish, and continuous learning takes place

Employees can support innovation is by **encouraging collaboration**, and be **willing to collaborate**

Leaders **empower employees**, and **become champions** of workplace ideas

Fostering of a **safe and supportive environment** that encourages change, taking risks, and sharing of ideas freely

Kaizen (Toyota Production System) The basic notion behind kaizen is that a continuous stream of hands-on improvements translates into substantial productivity and quality gains over time – The Toyota Way

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Pushing Boundaries
Innovation as the Catalyst for Growth

Each innovation can lead to subsequent innovations through a variety of interconnected mechanisms and pathways

Inspiration and Iteration - Innovations often inspire others to build upon existing ideas. When one innovation demonstrates a new possibility or approach, it can inspire others to iterate on that idea, leading to further refinements or entirely new innovations

Feedback Loop of Improvement - Innovations generate feedback from users, stakeholders, and the market, which can lead to further improvements or entirely new iterations. This feedback loop helps drive continuous innovation by identifying areas for enhancement or addressing unmet needs

Serendipity and Unexpected Discoveries - Sometimes, innovations arise unexpectedly through serendipitous discoveries or unintended consequences. These unexpected breakthroughs can open up new avenues for exploration and innovation

Cultural Shifts - Innovations can catalyze cultural shifts, influencing values, norms, and behaviors. These shifts may create new demands or opportunities for innovation in response to evolving needs and preferences.

Overall, innovations have a ripple effect, stimulating further innovation through inspiration, adaptation, collaboration, feedback, and the emergence of new opportunities and challenges. This dynamic process fuels ongoing progress and drives continuous advancement across the organization

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Shaping a Limitless Future
The Endless Possibilities of Workplace Innovation

Business and Process Automation

Business and process automation is an effective way to streamline manual processes through innovative, technological solutions

The solutions work to augment human labor to reduce the amount of manual (and tedious) work employees must complete each day, giving valuable time back

As new technologies emerges, greater opportunities to innovate takes place

We can stay on top of opportunities (and even get ahead) by learning more about workplace solutions even if you are not currently part of a function or program that typically uses them. As tools and solutions hit the market, consider how these solutions can help improve your job function

Areas with endless possible innovation –
- Workflow Automation
- Artificial Intelligence
- Robotic Process Automation
- Chatbot and Virtual Assistants
- Collaboration Platforms
- Intelligent Automation (combination of AI and RPA)

Microsoft 365

Power Automate — Process Automation
PowerApps — Application Development
Power BI — Business Analytics
Power Virtual Agent — Intelligent Bots

AI Connectors
DataVerse
AI Builder

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What is Artificial Intelligence
Have You Heard Of ChatGPT?

AI is not new; however, Generative AI is a "transformative" event.

The power of innovation often emerges from a combination of **awareness** and **adoption** of new ideas, fueled by human interaction and the influential networks through personal engagement.

Think of this event as having a **much bigger** impact than the modern mobile phone. (iPhone 2007)

ChatGPT

- Two months after release, **100,000,000** monthly **active** users

- Fastest adopted WebApp in history

- Direct access to generative AI capabilities to the masses

OpenAI

9:41
Tuesday, September 12

Influence of Artificial Intelligence
Driving Innovation in Other Industries