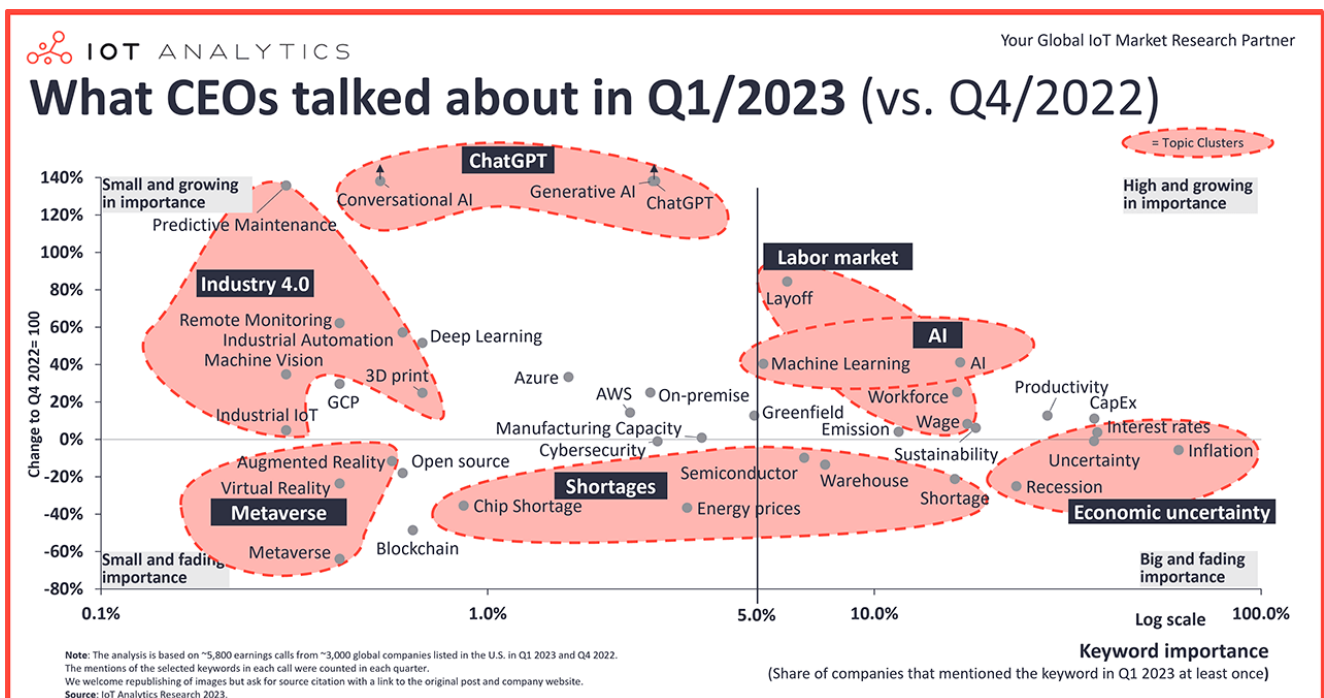


## INSIGHTS RELEASE

# What CEOs talked about in Q1/2023: Economic uncertainty, layoffs, and the rise of ChatGPT



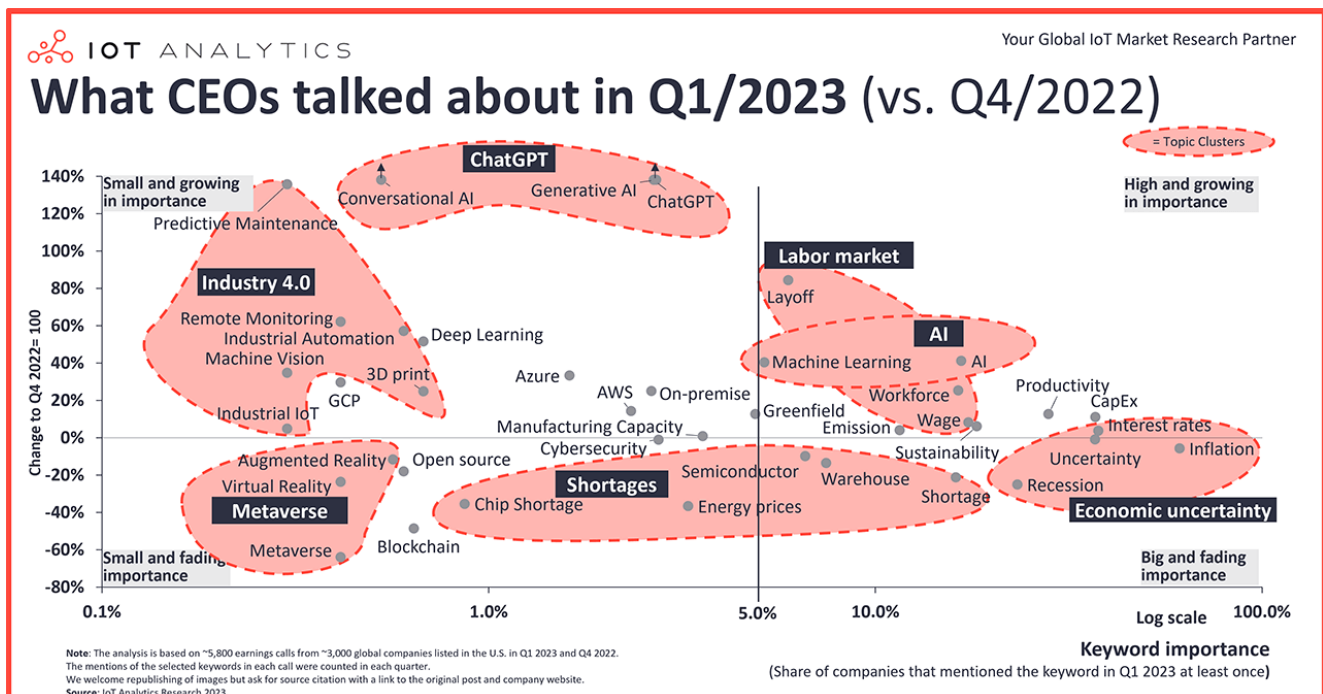
**Hamburg/Germany, April 5, 2023:** IoT Analytics, a leading global provider of market insights and strategic business intelligence for the Internet of Things (IoT), AI, Cloud, Edge, and Industry 4.0, conducted a keyword analysis based on a database of ~56,000 earnings calls of US-listed firms. 3 themes of interest stood out in Q1/2023 that are likely to influence the strategic agenda going forward.

### Key insights:

- According to the latest “What CEOs talked about” report, three themes noticeably gained traction in earnings calls in Q1/2023: 1. AI & ChatGPT, 2. the labor market, and 3. Industry 4.0. Discussions around (supply) shortages and the metaverse lost traction.
- Economic uncertainty (inflation, recession, and interest rates) remains the most important topic cluster overall.

## Key quotes:

**Philipp Wegner, Principal Analyst at IoT Analytics, comments:** "In Q1/2023, economic uncertainty was still the elephant in the room but the hype around ChatGPT also reached boardrooms. It really sparked discussions about future applications of AI across many industries. At the same time, various topics around Industry 4.0 gained momentum such as industrial automation, predictive maintenance or machine vision."



## The big picture

In Q1 2023, economic uncertainty was at the forefront of CEOs' minds globally and across the board. In 2023, 61% of all earnings calls discussed **inflation**, 23% talked about **recession**, and 38% mentioned **interest rates**. Even though inflation (-6% decline in mentions compared to Q4/2022) and recession (-25%) were less prevalent than in the last quarter of 2022, economic uncertainty was still the elephant in the room.

## Key upcoming themes

### *AI*

**AI** was discussed by 17% of CEOs (+ 41%). The interest in AI and **machine learning** was sparked by the release of **ChatGPT** and the discussions around potential use cases. ChatGPT was mentioned by 2.7% of companies in earnings calls in Q1/2023 (compared to no mentions in the previous quarter).

### *The labor market*

The **labor market** continues to rise in importance on CEOs' list of topics. **Layoffs** were discussed in 6% of all earnings calls (+84% compared to Q4/2022), and 18% discussed **wages** (+8% from Q4/2022).

### *Industry 4.0*

Another key upcoming theme in Q1/2023 is **Industry 4.0** and related topics. **Industrial automation** was discussed in 0.6% of all earnings calls(+57% compared to Q4/2022). However, the strongest increase in this group was registered for the keyword **predictive maintenance**, which increased by +136%.

## Declining themes

### *Supply shortages*

With supply chains slowly improving and **supply** shortages easing, discussions around **shortages** in general (-21%) and **chip shortages** (-35%) more specifically decreased strongly in Q1/2023.

### *The Metaverse*

Another theme that reduced in importance in Q1/2023 was the metaverse. The **metaverse** as a keyword declined by -64% in Q1/2023. Related technologies, such as virtual reality (-24%) and augmented reality (-12%), also declined.

## | About the analysis

The analysis highlighted in this article presents the results of IoT Analytics' research involving the Q1/2023 earnings calls of ~3,000 US-listed companies. The resulting visualization is an indication of the digital and related topics that CEOs prioritized in Q1/2023. The chart visualizes keyword importance and growth.

**X-axis:** Keyword importance (i.e., how many companies mentioned the keyword in earnings calls in Q2)—the further out the keyword falls on the x-axis, the more often the topic was mentioned.

**Y-axis:** Keyword growth (i.e., the increase or decrease in mentions from Q4/2022 to Q1/2023)—a higher number on the y-axis indicated that the topic had gained importance, while a negative number indicated decreased importance.

Read our Q4/2022 analysis [here](#).

## Q1/2023 deep dives

Three technological themes of interest in Q1/2023 are highlighted in this article in greater depth: AI & ChatGPT, Industry 4.0, and the metaverse.

### #1 AI & ChatGPT

ChatGPT was released on 30 November 2022. The chatbot, which is built on a large language model by OpenAI, went viral and set records as the fastest-growing consumer application in history, reaching 100 million active users within two months of its launch. ChatGPT sparked discussions around potential use cases of AI in general. 17% of all earnings calls mentioned AI, which constitutes a strong increase of +41% in Q1/2023. More specifically, generative AI was discussed by 2.7% of all earnings calls (an increase of nearly 1,600%) and conversational AI was mentioned in 0.5% of earnings calls.

ChatGPT was mentioned in 2.7% of all earnings calls, up from zero mentions in the last quarter. The CEO of IBM highlights the release of ChatGPT as one of the three key moments for AI in the last decade (after [IBM Watson winning Jeopardy](#) and [DeepMind winning GO](#) competitions). So far, most discussions that mention ChatGPT occur within earnings calls of technology companies that talk about how they want to market the new technology. Most applications have not reached large-scale adoption by enterprise end-users. But the potential is tremendous, including [use cases of generative AI for IoT](#).

## Key CEO quotes on AI and ChatGPT

Microsoft:

*"We're excited about **ChatGPT** being built on Azure and having the traction it has. So, we look to both. There is an investment part to it and there is a commercial partnership. But fundamentally, it's going to be something that's going to drive, I think, innovation and competitive differentiation in every one of the Microsoft solutions by leading in **AI**."*

**Satya Nadella, CEO, Microsoft, 24 January 2023**

IBM:

*"**AI** has become a big topic of conversation this year [...] If I think about it, over the last decade, I think there were three moments you can talk about, [...] One, when IBM won Jeopardy with Watson, [...] Second, when deep mind from Google or Alphabet started winning competitions around, for example, GO [...] and now with OpenAI and **ChatGPT**."*

**Arvind Krishna, CEO, IBM, 25 January 2023**

Meta:

*"**Generative AI** is an extremely exciting new area with so many applications, and one of my goals for Meta is to build on our research to become a leader in generative AI in addition to our leading work in recommendation AI."*

**Mark Zuckerberg, CEO, Meta, 1 February 2023**

Seagate Technologies:

*"If you think about it, early days of **AI** or training models and things like that, that needed access to big data sets. But I think as time goes on, big data sets have to be very real time to make decisions that are relevant in the moment."*

*"And sometimes, they need to be kept at the edge because you have a lot of video data, for example, at the edge, to make good decisions on consumer behavior or inventory, [...] all these new applications that are coming."*

**Dave Mosley, CEO Seagate Technologies, 25 January 2023**

## #2 Industry 4.0

As this analysis clearly shows, many companies discuss how to fight rising inflation, labor costs, and general cost pressure. Many business leaders come to the result that more, not less, investment into

digitization is the solution. Therefore, even during times of economic uncertainty, spending on enterprise IoT is expected to stay strong prior to 2027.

This expectation is also reflected in boardroom discussions: predictive maintenance (+136%), remote monitoring (+62%), and industrial automation (+57%) were discussed much more than in Q4 2022. Vendors and end users emphasize cost cutting through IoT-connected solutions. For example, machine vision enables many Industry 4.0-related use cases, such as flaw detection and operation optimization.

**Note:** The IoT Analytics team will be at the world's largest industrial fair, Hannover Messe 2023, in mid-April 2023 to discuss industrial transformation and Industry 4.0. Make sure to reach out!

### *Key CEO quotes on Industry 4.0*

Cognex:

*"The market is still in the early stages of adopting **machine vision**. Most companies are still highly reliant on labor, and very few warehouses globally are realizing the full potential of automation."*

**Rob Willett, President and CEO, Cognex, 17 February 2023**

Liberty Energy:

*"[...] We saw that in our cost of maintenance last year, our ability to run our equipment at, well, really flat maintenance costs in the face of very, very strong inflationary pressure. So that's a credit to that team and the work they've done from a **predictive maintenance** standpoint."*

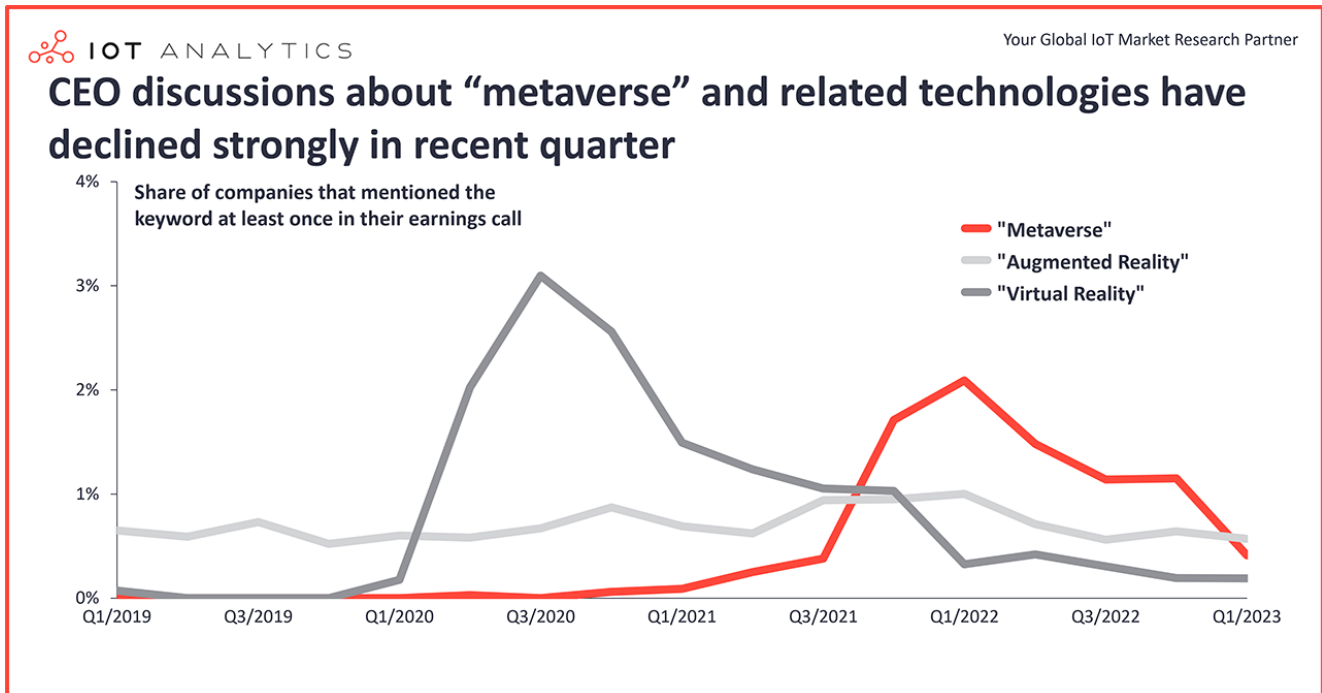
**Ron Gusek, President, Liberty Energy, 26 January 2023**

Acorn Energy:

*"I've talked about how inflation has an impact on our cost, but conversely, it can also have a benefit in terms of our business and our value proposition. This is because our monitoring solutions reduce the personnel costs, travel time, emissions, and overall environmental impact required to maintain industrial equipment and critical systems. Therefore, as our customers' costs increase, the return on investment of our services to them also improves. [...] Remote monitoring will always be a significantly less expensive alternative than physical inspection, particularly with higher personnel and fuel costs."*

**Jan Loeb, CEO, Acorn Energy, 16 March 2023**

## #3 The Metaverse



Mentions of the metaverse decreased by 64%. The keyword was mentioned in 0.4% of all earnings calls in Q1 2023. That constitutes a steep decline since its peak in Q1/2022 when a couple of companies jumped on the hype train and announced their own (industrial) metaverse projects, including **Microsoft**, **Siemens**, **Disney**, **Nvidia**, and **Meta**. In Q1/2022, about 2% of all earnings calls discussed the metaverse. However, in the last quarter, a lot of related layoffs and announcements show that the trend might be over for now. **Microsoft** laid off its Metaverse core team of roughly 100 employees in February 2023, and **Google** announced the end of its Google Glass Enterprise Edition. Some consumer-focused companies, such as **Disney**, have ended their metaverse projects for now. While the keyword “metaverse” might lose steam, related technologies are likely to stick around. The CEO of **T-Mobile**, Mike Sievert, said the following during an earnings call in October 2022: “No matter what you believe about how the metaverse might or might not unfold, clearly more immersive 3D experiences are on their way.”

Expected key product announcements from some leading tech companies are likely to set the tone for the market in the coming years and will play a role in whether the industrial metaverse becomes a reality. For example, in late March 2023, Nvidia and Microsoft announced a partnership to bring industrial metaverse applications to the cloud.

## Key CEO quotes on the metaverse

Ralph Lauren:

*"And as we continue to lead in gaming and the **metaverse**, we launched an innovative collaboration with Fortnite, targeted to next-gen consumers with additional exciting partnerships to come for spring and fall '23."*

**Patrice Louvet, CEO, Ralph Lauren, 9 February 2023**

Himax Technologies:

*"**Metaverse-related** developments are early in the lifecycle but overall remain an attractive opportunity for us potentially."*

**Jordan Wu, CEO, Himax Technologies, 9 February 2023**

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