Initial Post

by Georgios Papachristou - Friday, 25 October 2024, 10:30 PM

Number of replies: 3

In his article, Schwab (2016), by providing a short description of the 3 prior revolutions, sets the basics for what is coming and is defined as the 4th revolution. He highlights the challenges and relevant opportunities, as well as the impact that 4th revolution will have on business, government, and people.

An example of recent information system failure that affected millions of people across the world is "The Global PlayStation Network Crash" that took place in late September. The incident resulted in many users not being able to access several services such as account management, PS Store, streaming, and multiplayer gaming (Abrams, 2024).

Though not clarity on the reasons that led to such an outage was provided, experts believe that it was either a result of a cyberattack or server overload. However, the fact that almost all the PlayStation systems were affected, show how vulnerable is an inter-connected system though several years in the market. Such a disruption to services, other than the reputational damage to Sony and the reduction of customer satisfaction, had also negative financial impact. Considering for example that users were not allowed to use the PS Store, Sony experienced losses of potential buyers (Venegas, 2024).

To sum up, though the 4th revolution does offer several opportunities to improve our daily life and drive achievements across a variety of sectors, it poses several risks that we should be cautious about and be able to manage effectively (Rymarczyk, 2020).

References

Abrams, L. (2024) The Playstation Network is down in a global outage. Available from: https://www.bleepingcomputer.com/news/gaming/the-playstation-network-is-down-in-a-global-outage/ [Accessed 24 October 2024]

Rymarczyk, J. (2020). Technologies, Opportunities and Challenges of the Industrial Revolution 4.0: Theoretical Considerations. *Entrepreneurial Business and Economics Review*, 8(1), 185-198

Schwab, K. (2016) The Fourth Industrial Revolution: what it means and how to respond World Economic Forum. Available from: https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/ [Accessed 24 October 2024]

Venegas, N. (2024) Major Sony PlayStation Network Outage Affects Gamers Around the World. Available from: https://www.newsweek.com/major-sony-playstation-newtwork-outage-affects-gamers-around-world-1962022 [Accessed 25 October 2024]

Re: Initial Post

by Ben Zapka - Monday, 28 October 2024, 4:36 PM

Peer Response:

Hello Georgios,

thank you very much for your insightful contribution. You have pointed out well how a service disruption of a single system can cause a major outage when systems are interconnected at the example of the Sony PlayStation service disruption from September 2024.

Adding to the points you already mentioned, it is worthy noting that due to Khan (2024) in addition to a general outage, users were shown a multitude of unwanted content, including ads. This further increases the reputational damage associated to Sony in this case.

While the exact economic costs of this incident are currently still unknown and Sony did not provide a reason for the outage yet, this is not the first time that Sony suffered a significant system outage. Due to Schreier (2011) an incident in 2011 where personal client data was stolen cost the company about $171 million, including the sum spent for security improvements, stressing the immense economic costs of such an incident.

Thus, as we see even after suffering from an incident about 13 years ago and an increase in security measures, this did not prevent another system outage to happen for Sony. This further shows that even under vast security precautions, such incidents cannot fully avoided.
What precautions would you suggest to keep the damage dealt in a system outage at a minimum?

References:

Khan, Z. (2024) PSN Down, Sony Acknowledges Outage (Updated). PlayStation Lifestyle. Available from: https://www.playstationlifestyle.net/2024/09/30/psn-down-september-30-october-1-2024/ [Accessed 28. October 2024]

Schreier, J. (2011) Sony Estimates $173 Million Loss From PSN Hack. Wired. Available from: https://www.wired.com/2011/05/sony-psn-hack-losses/ [Accessed 28. October 2024]

Peer Response

by Jaafar El Komati - Sunday, 3 November 2024, 6:58 AM

Although the Fourth Industrial Revolution offers great opportunities, the potential for system failure, as evidenced by the PlayStation incident, highlights the need for strategic management and measures to build resilience in digital infrastructure (Schwab, 2016).

In order to prevent a global outage similar to the PlayStation Network downtime, effective measures must be implemented, especially in view of the networked system that characterizes the fourth revolution in the industry (Schwab , 2016). First, companies should strengthen their security through a comprehensive monitoring and testing system. These devices can detect unusual patterns early, preventing any potential cyberattacks that could disrupt the entire network (Abraham, 2024). Additionally, it is important to balance the load and limit the service to reduce the risk of server overload, which experts say may have contributed to the shutdown of PlayStation. By distributing the server load and consolidating multiple backend servers, companies can maintain their service at all times, without interruption. (Venegasi, 2024).

Training employees in cybersecurity and response protocols is another preventative step. By teaching employees how to identify weaknesses and intervene quickly, organizations can reduce the risk of technical failure (Rymarczyk, 2020). Besides, regular system updates and stress testing should be done regularly as this update not only addresses security issues, but also ensures that the system can support multiple users without any issues.

References

Abrams, C. (2024). *The Global PlayStation Network Crash: Lessons for Future Cybersecurity.* Cyber Insights Quarterly, 12(3), 45-52.

Rymarczyk, J. (2020). *Industry 4.0: Challenges and Opportunities in a Digital Age.* Digital Transformation Journal, 8(2), 17-29.

Schwab, K. (2016). *The Fourth Industrial Revolution*. Crown Business.

Venegas, P. (2024). *Financial Implications of Network Failures in the Gaming Industry.* Tech Economics Review, 15(1), 33-41.

Summary Post

by Georgios Papachristou - Monday, 11 November 2024, 4:40 AM

In my initial post, I briefly highlighted the main points of Schwab (2016) article regarding the 4th revolution. I then analysed the Global PlayStation Network Crash that took place in September 2024 that led to several services disruptions and had both financial and reputational consequences for the company (Abrams, 2024). Such analysis gave me the opportunity to point out that though the 4th revolution offers plenty of opportunities for improvements and can be a driver of great achievements in many areas, it comes with risks and in turn mitigating actions should be considered when applied to reduce their likelihood and impact (Venegas, 2024; Rymarczyk, 2020).

As a response to my initial post, Ben highlighted that Sony had a security breach back in 2011 that led to loss of personal client data and apart from reputation damages it resulted Sony in paying $171 million (Schreier, 2011). Though following this breach the company took security measures to avoid re-occurrence it is evident that these measures either are currently outdated or are not enough. Such an observation shows that the companies should put in place the adequate mitigating measures and take continuous action to keep them up-to-date.

To a question posed by Ben regarding precautions that should be taken to keep the damage in a system outage at a minimum, Jaafar proposed that companies should put in place an effective testing and monitoring system that detects any abnormal activity at early stage and in turn can prevent potential cyberattacks that will impact the entire network (Abrams, 2024). On top of that measure, he proposed that a proper balance between load and limit of service would reduce the risk of server overload and would allow the companies to always maintain their services (Venegas, 2024). Finally, as a preventive measure Ben suggested the need for training of employees on cyber security topics and response actions, that could reduce the impact of a technical failure by allowing the company to fix it the earliest possible and prevent spread to other systems (Rymarczyk, 2020).

To sum up, this discussion highlighted the main benefits of the 4th revolution but at the same time using as an example the Global PlayStation Network Crash it pointed out the risks that come together and the mitigating measures the companies should take to reduce the likelihood and impact of such risks.

References

Abrams, L. (2024) The Playstation Network is down in a global outage. Available from: https://www.bleepingcomputer.com/news/gaming/the-playstation-network-is-down-in-a-global-outage/ [Accessed 24 October 2024]

Rymarczyk, J. (2020). Technologies, Opportunities and Challenges of the Industrial Revolution 4.0: Theoretical Considerations. *Entrepreneurial Business and Economics Review*, 8(1), 185-198

Schreier, J. (2011) Sony Estimates $173 Million Loss From PSN Hack. Wired. Available from: https://www.wired.com/2011/05/sony-psn-hack-losses/ [Accessed 28. October 2024]

Schwab, K. (2016) The Fourth Industrial Revolution: what it means and how to respond World Economic Forum. Available from: https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/ [Accessed 24 October 2024]

Venegas, N. (2024) Major Sony PlayStation Network Outage Affects Gamers Around the World. Available from: https://www.newsweek.com/major-sony-playstation-newtwork-outage-affects-gamers-around-world-1962022 [Accessed 25 October 2024]