Name: Christopher Nowacki Class: CIS 280 Assignment: ROI on Cloud-Based

There are a lot of factors which contribute to the ROI of cloud-based software development environments.

Cloud-based environments can provide some amount of cost-savings and efficiency, but are not without their own drawbacks. For example, the cost of setting up and maintaining a cloud-based environment is likely far more cost-effective than running your software development firm out of a traditional in-person office. If you go pure cloud-based, you can save money on office space, office personnel, and you should theoretically need less IT staff. The startup "Coder" claims that cloud-based environments can help software engineers work faster and more efficiently $\binom{1}{2}$.

Measuring ROI

Measuring ROI can be difficult, but it's important to consider organizational goals like reducing time to market, cutting costs, and/or improving business agility. A clear way to see ROI for cloud-based environments is by looking at how cloud investment positively affects an organization's bottom line. (3)

Nucleus Research showed that the ROI of cloud-based solutions was much higher than traditional in-office solutions. As of their latest report in November '22, cloud-based solutions had an ROI that was 4.01 times greater than on-premises solutions and were 2.5 times quicker to deploy.(4)

Cloud-based solutions offer better scalability and business agility, helping organizations quickly adapt to market changes and user needs – as well as allowing them to grow their operations with less upfront investment.⁽⁵⁾

Other advantages include offering remote work, improving user adoption, and making low-no-code app development possible. $(^6)$

Cloud-based systems have drawbacks too – they depend on a single platform, and issues with internet connectivity and bandwidth can disrupt access to data and cause downtime. These systems are also more vulnerable to cyberattacks and other security issues as they "live" on the internet.

 $^{{}^{1} \}texttt{https://www.forbes.com/sites/forbestechcouncil/2021/01/28/the-roi-of-the-cloud/?sh=fb9e11976714}$

²https://spectrum.ieee.org/software-development-environments-cloud

³https://www.capgemini.com/insights/expert-perspectives/the-roi-of-moving-to-the-cloud

⁴https://www.forbes.com/sites/forbestechcouncil/2021/01/28/the-rio-of-the-cloud/

⁵https://www.capgemini.com/insights/expert-perspectives/the-roi-of-moving-to-the-cloud/

 $^{^6}$ https://www.forbes.com/sites/forbestechcouncil/2021/01/28/the-rio-of-the-cloud/