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# How do you solve a problem like Cloud waste?

Cloud computing is agile by nature. A cornerstone for modern businesses looking to scale up or down quickly according to their needs. But with this flexibility also comes complexity, and as more businesses move to a hybrid and/or multi-cloud model, infrastructure costs inevitably become harder to track. Infrastructure-as-Code (IaC) such as Terraform has helped to remove the burden of manual provisioning from teams, but it has also created additional complexity due to the ever-changing nature of infrastructure.

Where do these costs come from? Well, it's actually quite a straightforward analogy. The switch from traditional data centres to public or private cloud has seen infrastructure – much like energy, water, or heating – used like a utility. **And like any utility, there is waste.** Think of it like leaving a tap on in the bathroom or, worse, failing to reset the thermostat if you're heading away for a weekend break. Managing your infrastructure is much the same. If you leave servers running over the weekend when you don't need them, you're going to be paying for a lot of unnecessary on-demand resources. It all adds up.

And it adds up to a lot, in fact. Cloud waste is booming, both from a financial and environmental perspective. All of which has an impact on businesses. Based on data collected by Gartner, costs **associated with cloud waste or overprovisioning are expected to exceed $26.6 billion in 2021.** *That's a lot of inefficient expenditure. So, with this in mind, how can businesses take back control of these monthly costs?*

Accurately estimate your costs ahead of time

Everyone using a public cloud platform – AWS, Azure or GCP – is under pressure to get a handle on their cloud waste. And for both the Heads of IT and primary cloud users such as DevOps teams, development teams, solution architects or even presales, cloud cost control is a priority. **The challenge has been around predicting these costs with any sort of accuracy.**
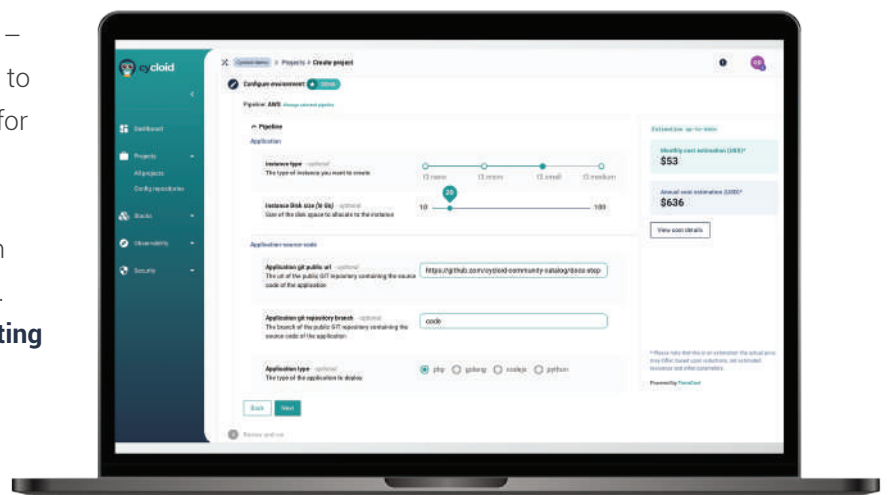
For DevOps teams (and Cycloid users!) building the applications and infrastructure that ultimately drives cloud costs, it is difficult to have visibility into how their day-to-day design, build, and run decisions will affect the bottom line. For example, those servers running over the weekend might also be recording backup images on a nightly basis. Not necessarily a problem until you realise how much infrastructure they are consuming. And even then, you're not going to realise the true scale of the cost until you get your monthly bill.

Understanding the consequences of these specific decisions and calculating the impact they will have on the bottom line, ahead of time, is critical.

This means weighing up the pros and cons in advance and tailoring the best possible resourcing for the business as a whole. In highly complex, hybrid and/or multi-cloud environments, this ability to estimate costs can be achieved through a blend of automation and deep DevOps/ cloud expertise, enabling businesses to reduce cloud waste and spend money elsewhere.

Empowerment at the right price

Cloud cost estimation can save businesses time and money and enable applications, teams and IaC to scale without adding unnecessary complexity and cost. This means that businesses can be safe in the knowledge, before they deploy their cloud facilities, that monthly costs are accurate, clear, and visible.

Our newly introduced Cost Estimation capability is part of Cycloid's broader strategy to optimize the way people use technologies and the cloud. We acutely understand the importance of relieving the burden of hybrid-cloud infrastructure management and removing inefficiencies where possible. Cost Estimation, which sits within the Cycloid Hybrid-Cloud DevOps Collaboration Platform, has been built for modern businesses wanting to take back control of their cloud infrastructure and plan their cloud strategies with optimum levels of accuracy and visibility. This new capability aligns with our **Open Source strategy and is based on the Cycloid: TerraCost project.**
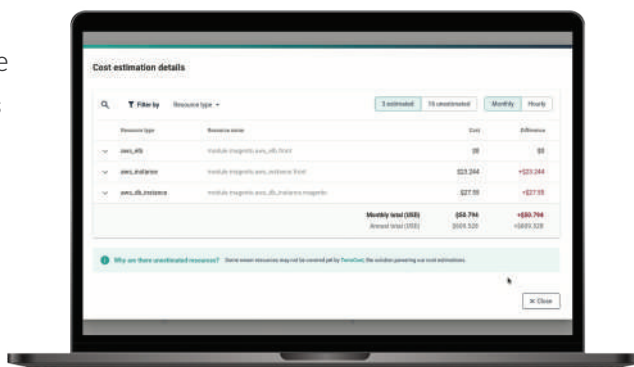
Through a sliding scale interface, users simply select a stack that can be found in a service catalogue deployed by the DevOps team, enter how much compute, storage or any other resources they require and receive an instant predicted monthly cost - not too dissimilar to an insurance cost comparison website. **These insights provide not just an accurate picture of what the cloud costs will be, but also allows users to switch between providers and resource level options to obtain the best deals and value for money.**

Ultimately, contemporary DevOps features such as cost estimation are ensuring that businesses understand pre-deployment what they are implementing, and exactly what they need to guarantee a return on investment from day one. This means that stakeholders can be safe in the knowledge that there is no blind deployment, no hidden costs, and that their decisions are data-driven and not 'finger in the air' estimations.