

Data Center TCO Framework

The full cost of owning and operating a data center — including the waste most teams never measure

The full cost picture

Capital costs

Servers, storage, network, racks, power distribution, UPS, cooling equipment, facility buildout

Energy & cooling

Server power draw, rack density and thermal load, cooling efficiency, PUE, peak demand charges, hot spots

Operating costs

Electricity, maintenance contracts, software licenses, monitoring tools, support, salaries, training, compliance

Hidden staffing waste

Manual asset updates, repeated inspections, switching between monitoring systems, correlating alerts by hand, validating stale records

How monitoring tool sprawl increases TCO

- More software licensing cost
- More integration work
- More training overhead
- More alert noise
- More manual correlation
- Slower troubleshooting
- Less confidence in data accuracy
- Engineers lose time moving across systems per incident

Downtime: often the most expensive line

Downtime cost includes lost revenue, reduced productivity, SLA penalties, customer dissatisfaction, regulatory exposure, emergency labor, and reputational damage. Downtime cost is strongly connected to visibility: earlier detection and faster root cause shrink both duration and risk.

What unified operations (DCIM + ITOM + AIOps) can deliver

- Infrastructure health across domains in one view
- Less manual asset work
- Hardware and environmental risk detected earlier
- Lower troubleshooting time
- Reduced alert noise
- Better capacity planning
- Audit and compliance support
- Infrastructure issues connected to business impact

In some environments operating costs eventually exceed the original infrastructure investment. Ask not only “what does this cost to buy?” but “what will it cost to operate, monitor, troubleshoot, and maintain?”