Everything You Need To Know About Cloud Computing

What Every Business Owner Should Consider When Choosing Cloud Hosted Versus Internally Hosted Software

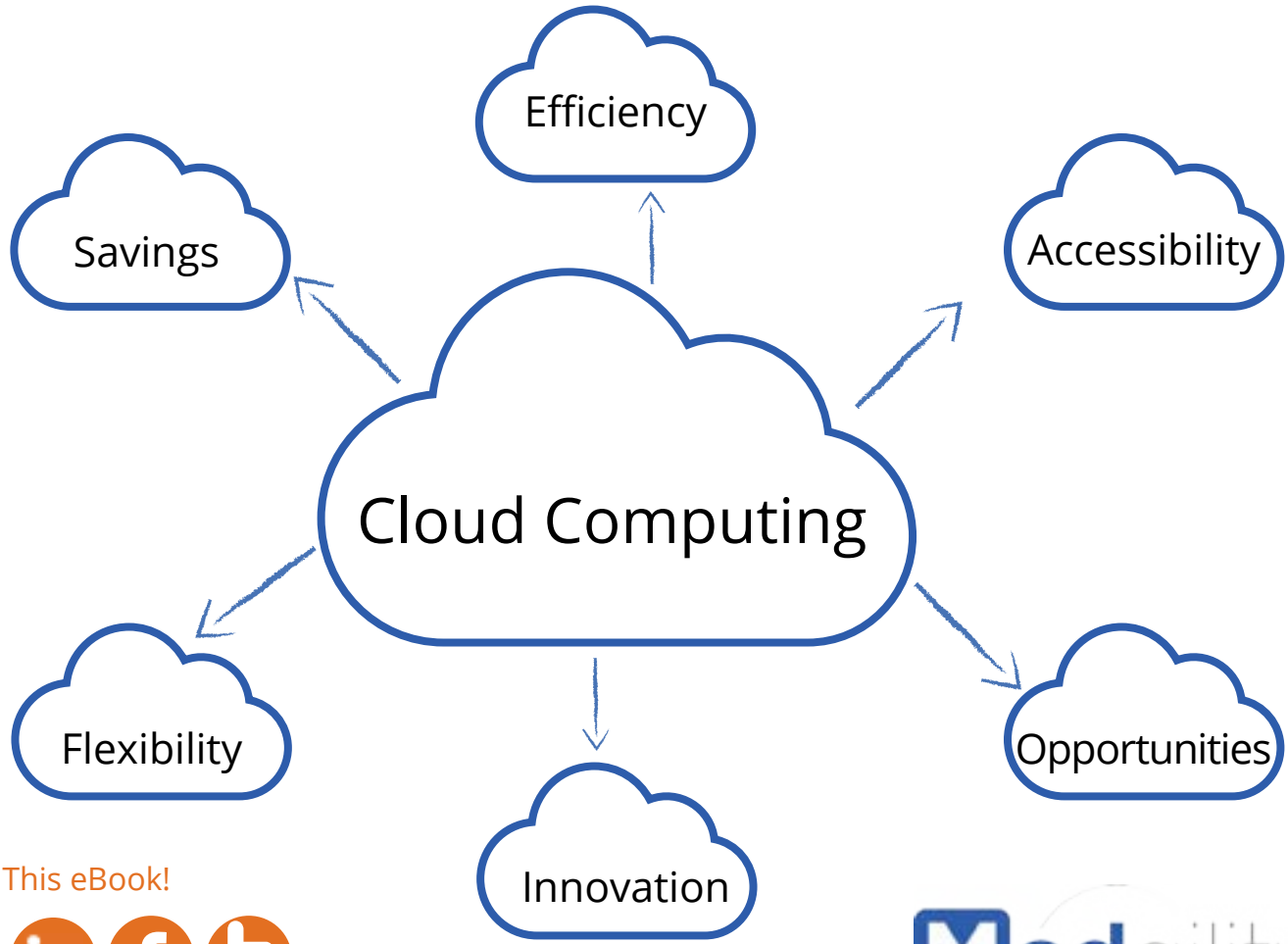
Modgility

INTRODUCTION

Cloud computing is the current information technology phrase du jour… The challenge is that everyone has a different definition.

As a metaphor for the Internet, "the cloud" is a familiar cliché, but when combined with "computing", "hosting", "data sharing", or "application" the meaning gets more complex and less clear.

Wikipedia states: "The popularity of the term can be attributed to its use in marketing to sell hosted services in the sense of application service provisioning that run client server software on a remote location."



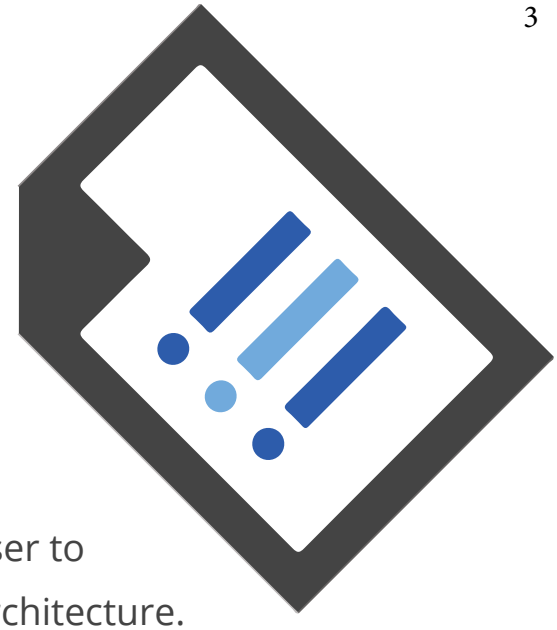
CLOUD COMPUTING

In a recent study, Luth Research and Vanson Bourne (CA Technologies - NASDAQ: CA) surveyed companies that are currently using cloud services to get specifics on how cloud computing is being used, top problems or successes, and how its use changes as IT teams gain more experience.

Results were revealing—the benefits of using cloud computing are by all accounts living up to the hype. In fact, many of the predicted problems are not actually being reported:

- Nearly 100% overall satisfaction with cloud results (innovation, cost, revenue, performance)
- The longer a company used cloud, the more likely that cloud exceeded expectations (71% who have been in the cloud for 4+ years said it exceeded expectations)
- Around 50% of respondents have already moved mission-critical apps to the cloud
- 98% of respondents reported that the cloud met or exceeded their expectations for security

DEFINITIONS



SaaS - Software as a Service

Delivers a single application through the browser to thousands of customers using a multitenant architecture.

IaaS/PaaS - Infrastructure/Platform as a Service

Also called “cloud hosting” and “utility computing,” infrastructure as a service (IaaS) provides the servers and operating systems. On the other hand, platform as a service (PaaS) adds the databases, runtime engines and other necessary system software for the customer and IT departments to access on demand and run their own applications.

Web services in the cloud

Web service providers offer APIs that enable developers to exploit functionality over the Internet, rather than delivering full-blown applications.

Virtualization

Server virtualization allows application workloads to be easily added and removed as self-contained modules.

Public Cloud

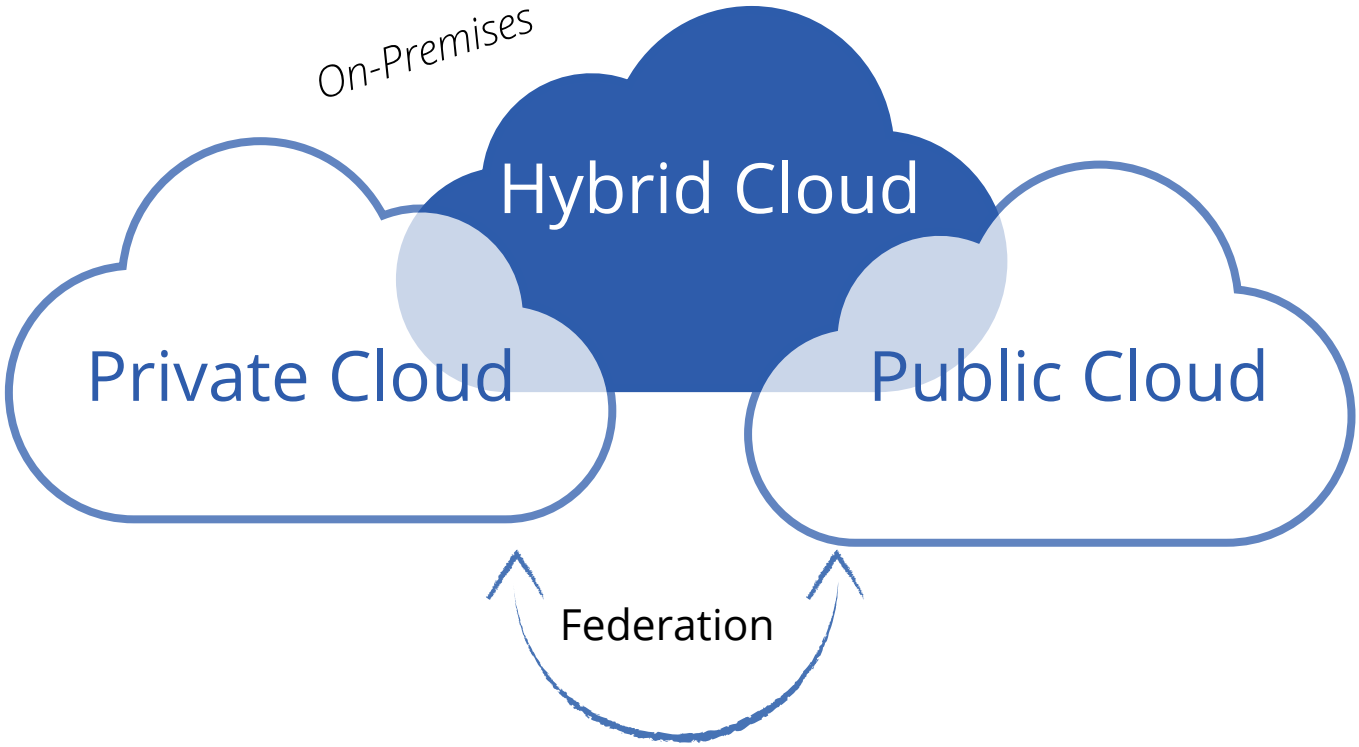
Where services are rendered over a network that is open for public use and accessed only via Internet (direct connectivity is not offered).

Private Cloud

Provides the same flexibility and self-service capabilities, but with complete control of privacy. Private cloud is cloud infrastructure operated solely for a single organization, whether managed internally or by a third-party and hosted internally or externally.

Hybrid Cloud

contains both private and public components typically from multiple providers.



PURPOSE

All the definitions and success stories aside, what you, the business owner, care about is "What does it do for me?"

Before you can even address the question "to cloud or not to cloud" you need to make sure you have a clear definition of what your software needs to do: Not only the user and data functions but important attributes about the software as a business system.

1 *Access*

Which users, clients, agencies, and staff need access to your software's functions and the data it manipulates?
Where are they located and what access to networks are available to them?

2 *Availability*

When is access required - time of day, weekends, etc.
How critical is access to the system and how long can it be unavailable to users?

3 *Budget*

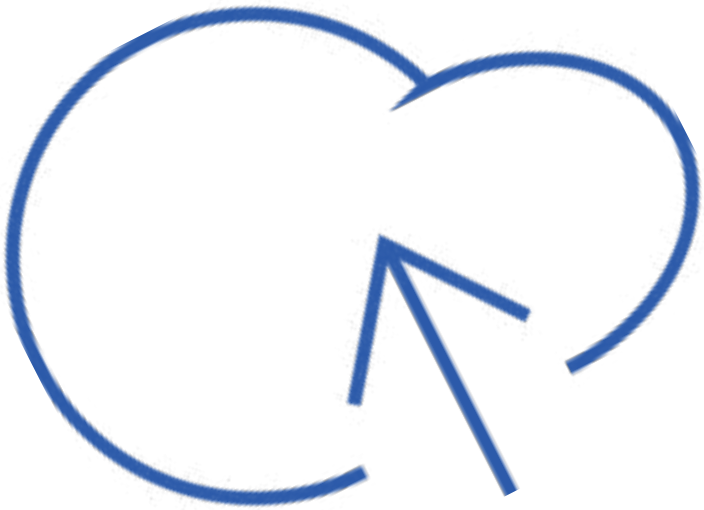
Are there budgetary constraints or timing issues that would impact a possible solution?

4 *Backup and Recovery*

If the system goes down, how fast does it need to become available again? How often does data change and how much data is there?

5 *Data sharing*

Are there other data/software systems that must share information with this software? Is that sharing real-time or batched? Automated or manual?

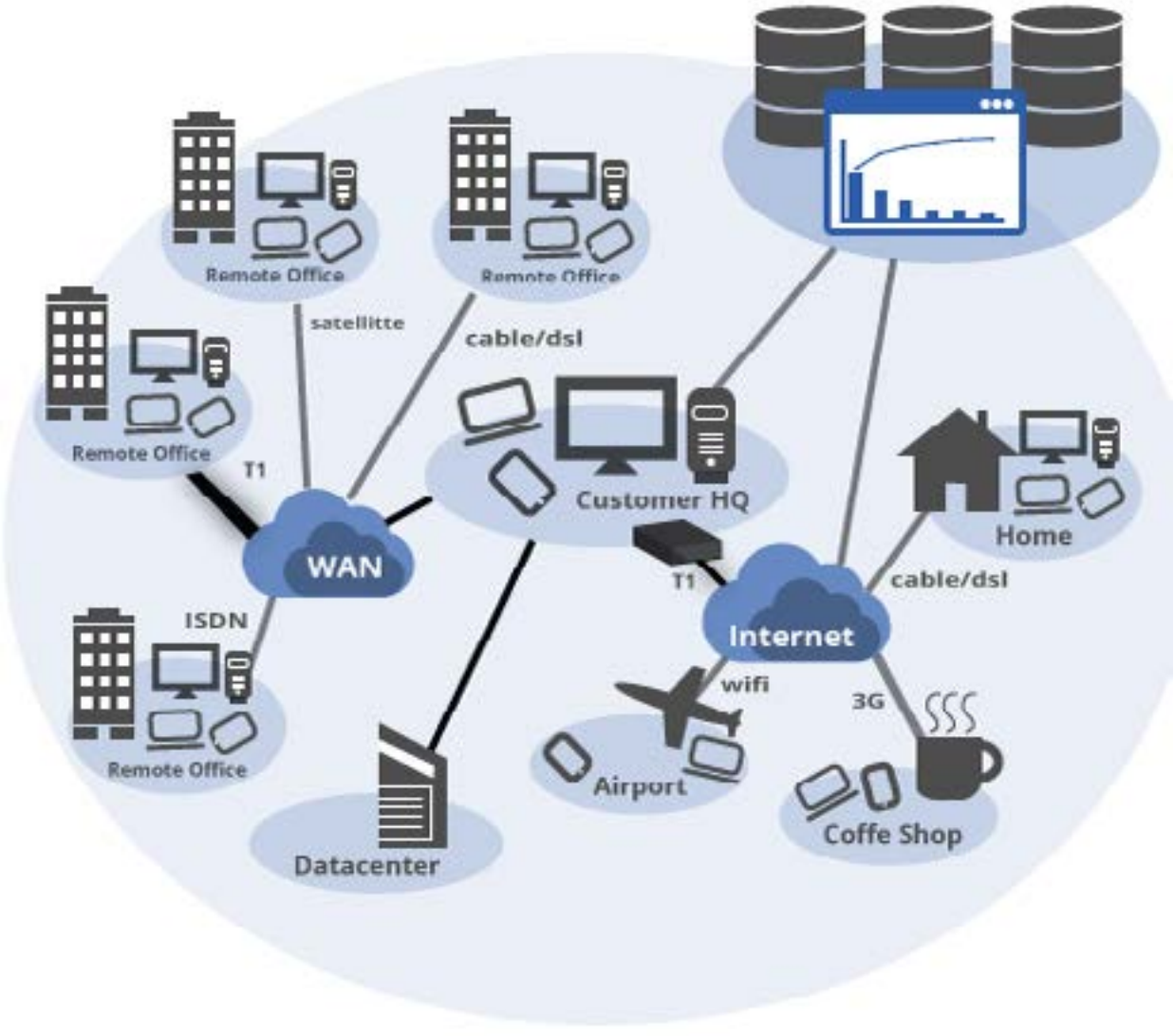


6 *Security*

How sensitive is the data to your company?

Would it be the target of overt action by others to acquire or disrupt?

Are there legal or other requirements for security of the data and software interface?

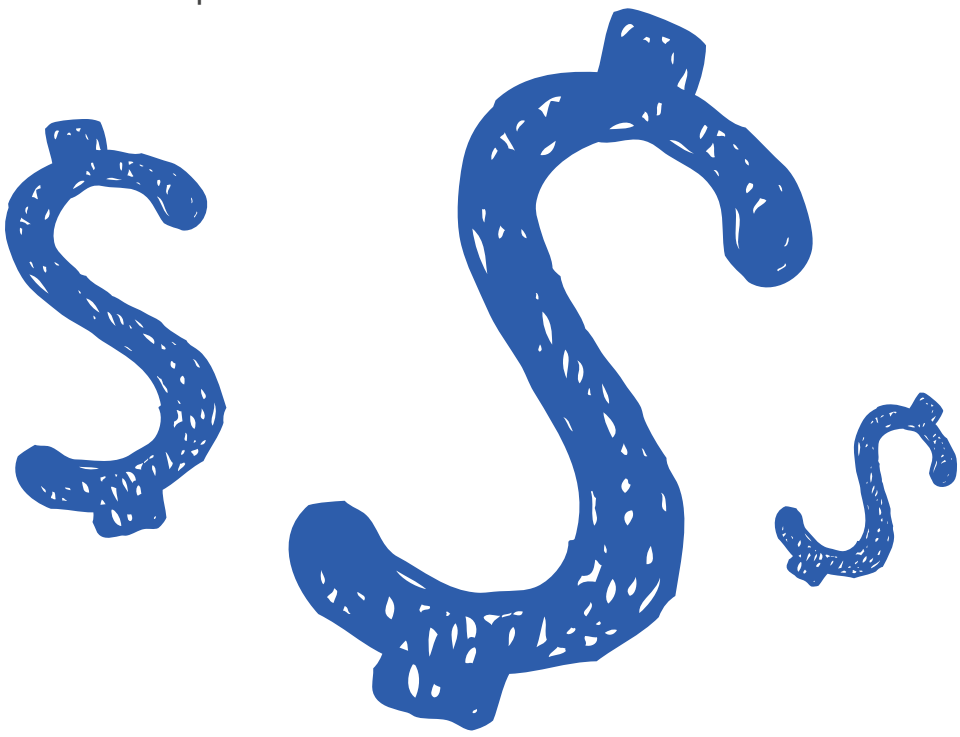


BENEFITS

Cloud computing can completely change the way companies use technology to service customers, partners, and suppliers, giving them new ability and agility.

Cost Efficiency

A big advantage of cloud computing is the elimination of the investment in stand-alone software or servers. By leveraging cloud's capabilities, companies can save on licensing fees and at the same time eliminate overhead charges such as the cost of data storage, software updates, management etc. A public-cloud delivery model converts capital expenditure to operational expenditure.



Location Independence and continuous availability

Public clouds offer services that are available wherever the end user might be located. This approach enables easy access to information and accommodates the needs of users in different time zones and geographic locations. As a side benefit, collaboration booms since it is now easier than ever to access, view and modify shared documents and files.

Backup and Recovery

The process of backing up and recovering data is simplified since those now reside on the cloud and not on a physical device. The various cloud providers offer reliable and flexible backup/recovery solutions. In some cases, the cloud itself is used solely as a backup repository of the data located in local computers.

Resiliency and Redundancy

A cloud deployment is usually built on a robust architecture thus providing resiliency and redundancy to its users. The cloud offers automatic failover between hardware platforms out of the box, while disaster recovery services are also often included.

Scalability and Performance

Scalability is a built-in feature for cloud deployments. Cloud instances are deployed automatically only when needed and as a result, you pay only for the applications and data storage you need. Hand in hand, also comes elasticity, since clouds can be scaled to meet your changing IT system demands.

Increased Storage Capacity

The cloud can accommodate and store much more data compared to a personal computer and in a way offers almost unlimited storage capacity. It eliminates worries about running out of storage space and at the same time It spares businesses the need to upgrade their computer hardware, further reducing the overall IT cost.

Device Independence

Cloud computing services can be accessed via a plethora of electronic devices that are able to have access to the internet. These devices include not only the traditional PCs, but also smartphones, tablets etc.

Smaller learning curve

Cloud applications usually entail smaller learning curves since people are quietly used to them. Users find it easier to adopt them and come up to speed much faster. Main examples of this are applications like GMail and Google Docs.

DISADVANTAGES

Not a panacea, Cloud Computing still has issues with certain application needs that should be specifically addressed.

Security

By leveraging a remote infrastructure, a company's private data and information is at the very least accessible to the host personnel, thus the provider's reliability and trustworthiness is very important.

Privacy

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Vendor Dependency

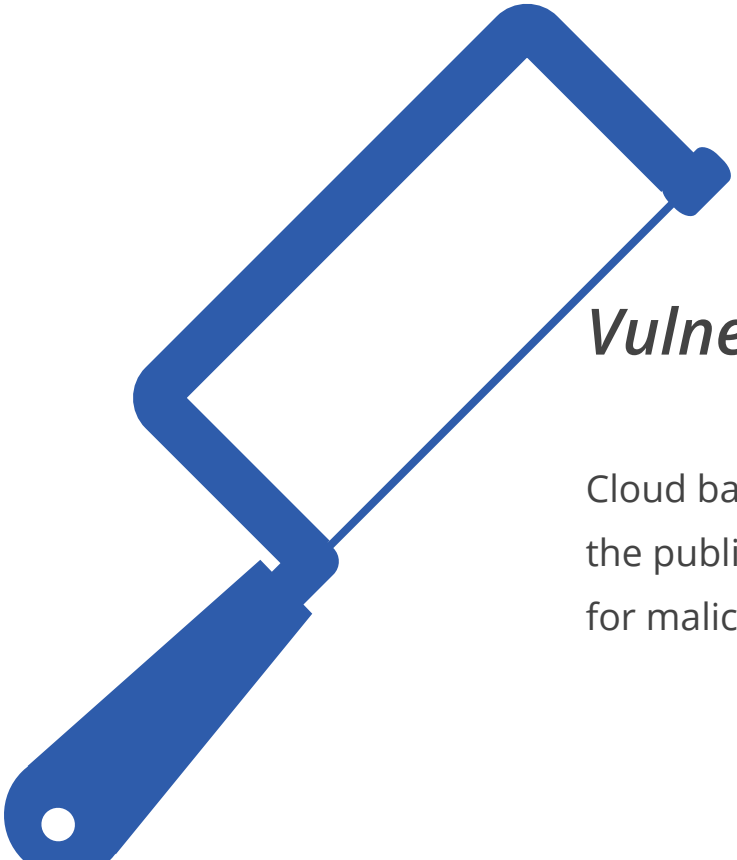
There is an implicit dependency on the provider making it time consuming and potentially expensive to migrate from one provider to another.

Technical Difficulties and Downtime

Although this is often one of the main benefits, outage and downtime is possible even to the best cloud service providers.

Internet Connection Dependency

User access is dependent on internet access, thus any network or connectivity problems will render the system unuseable.



Vulnerability to Hackers

Cloud based solutions are accessed via the public internet and can be a target for malicious users and hackers.

MAKING YOUR DECISION

Because most of the pros and cons along with your company's individual situation is not strictly quantifiable, making a decision can seem somewhat arbitrary. However, a simple Pareto Analysis can help steer you better (or at least make you feel good about your decision).

Pareto Analysis uses the Pareto Principle – also known as the "80/20 Rule" – which is the idea that 20 percent of causes generate 80 percent of results. With this tool, we're trying to find the 20 percent of work that will generate 80 percent of the results that doing all of the work would deliver.

How to do the Analysis

STEP 1: IDENTIFY AND LIST PROS AND CONS

First, write a list of the major factors that weight into the decision.

STEP 2: IDENTIFY THE ROOT IMPACT OF EACH

For each factor, identify its fundamental impact.

STEP 3: SCORE IMPACTS

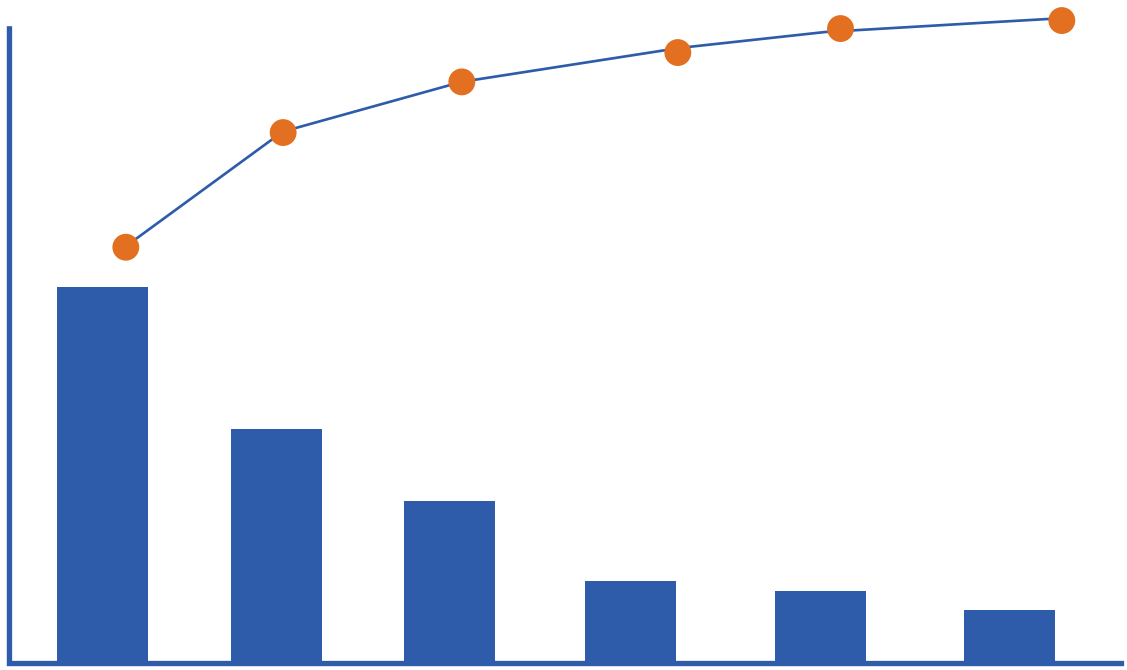
The scoring method you use depends on the sort of problem you're trying to solve. For example, if you are trying to save time you could score on a scale of 1 – 10 based on the time saving of the impact.

STEP 4: GROUP PROBLEMS TOGETHER BY ROOT CAUSE

Next, group factors together by impact.

STEP 5: ADD UP THE SCORES FOR EACH GROUP

Keep in mind that low scoring factors may not even be worth bothering with - solving these problems may cost you more than the solutions are worth.



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