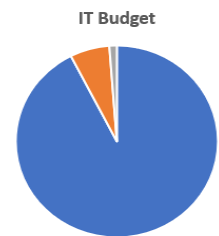


The TMC ADVISOR

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Presenting IT Budgets Graphically By Ellen Koskinen-Dodgson

Asking for the IT budget that you need is a perpetual struggle. It's easy for decision makers to downgrade the importance of your budget request in favour of funding something in the organization's main line of business. If you're a municipality, then fixing roads, if you're a school district, then better resources for students or teachers. Here are three ways that you can use graphics that I think will grab some attention.



Keeping on Top of Your Data By Peter Aggus

These days, storage is relatively cheap—but backing up everything is not always better. We recommend designing your backup structure and process to be fit for purpose, not just a data dump. As an end user, you need to work with IT staff to ensure that your IT backups deliver what you need. Here is a look at the issues and what we recommend as best practices, including anticipating cybercriminal attacks and disasters.



How Do You Rate?

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- Reliability
- Staffing Levels
- Costs
- Customer Service

For a free copy of "What to Assess and Why," email: assessment@tmconsulting.ca.



Worth Protecting: Your Vital Records By Guy Robertson

Is your office paperless yet? No. You still rely on paper. Despite the growth of electronic records, you use lots of paper for your daily operations. In fact, in many offices there is solid evidence that the growth of paper files occurs as quickly as the implementation of new IT. Often, many vital records are still on paper and without these records, your operations will be crippled. Here's how to keep them safe.



Massive AI Implementation Within 3 Years By Roban Chahal

Generative (AI) is a category of algorithms (such as ChatGPT) that can be used to create new content, including audio, software code, images, text, and videos. Gartner predicts that by 2030, a major blockbuster film will be released with 90% of the film generated by Generative AI, up from 0% in 2022. Here are Gartner's 3-year predictions and our suggestion of how you might start a pilot.



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The Normal Way

Everyone presents their budgets as a table of line items with a simple description, a short justification and a dollar amount, with everything totalled at the bottom. Every department does the same and you end up with a dozen departments asking for money that adds up to much more than the available dollar amounts that will be allocated.

Obviously, it isn't possible to provide everyone the full amount of money that they ask for so you need to be persuasive.

Using Graphics

Help senior management think about what you're asking for in terms that align with their thinking. Financially-focused executives don't understand the role that IT plays in the organization's operations and initiatives.

Categorize your requests by the Gartner model:

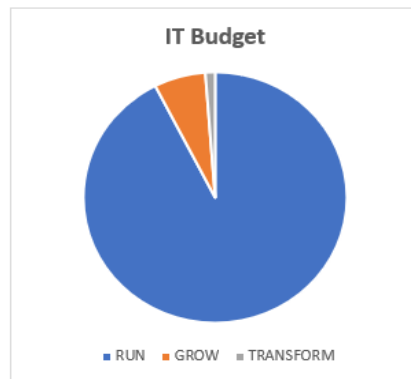
- RUN (keeping the lights on)
- GROW (expanding and enhancing what you already have)
- TRANSFORM

Use graphics to show the percentage of each that your budget request supports. Perhaps you could pair it with a graphic that shows the breakdown if

Budget Breakdown

Item	Cost	Classification
aaa	\$240,000	RUN
bbb	\$95,000	GROW
ccc	\$296,000	RUN
ddd	\$160,000	RUN
eee	\$164,000	RUN
fff	\$423,000	RUN
ggg	\$192,000	RUN
hhh	\$19,000	TRANSFORM

TOTAL \$1,589,000



you were following best practices. It's often quite an eye opener.

Or Tie It To Strategy

An alternate approach is to create a graphic that shows what percentage of the IT budget is focused on supporting the organization's strategic goals. You might find that

you have a solid circle showing 100% of IT budget is being used to support things that are not aligned with organizational strategic objectives. That is, your budget has 0% allocated to supporting strategic initiatives.

This clearly demonstrates that IT needs even more money. Now that's a conversation starter!

If You Need More Money

It's your job to ask for all of the money that you need to properly deliver the services that the organization has mandated, but many IT managers/directors know that they won't get the money that they ask for so they don't even ask.

if you have asked for less than you need in the past and you have some built-up underfunding, then you'll need an extra graphic in the set. I recommend that you present:

- what we've asked for
- what we need
- what we would need if we were to follow best practices

If you'd like to explore these ideas further or comment on this article, contact me at ellen@tmccconsulting.ca.

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Ellen Koskinen-Dodgson is President and Managing Partner of TMC IT and Telecom Consulting Inc. She is an IT and Telecommunications Management Consultant, electrical engineer, author, speaker, media resource and Expert Witness.

Keeping on Top of Your Data *By Peter Aggus*



These days, storage is relatively cheap—but backing up everything is not always better. We recommend designing your backup structure and process to be fit for purpose, not just a data dump. As an end user, you need to work with IT staff to ensure that your IT backups deliver what you need. Here is a look at the issues and what we recommend as best practices, including anticipating cybercriminal attacks and disasters.

Why Backup

We do backups because we cannot rely on data integrity. The risk of compromise or loss comes from a variety of issues, such as:

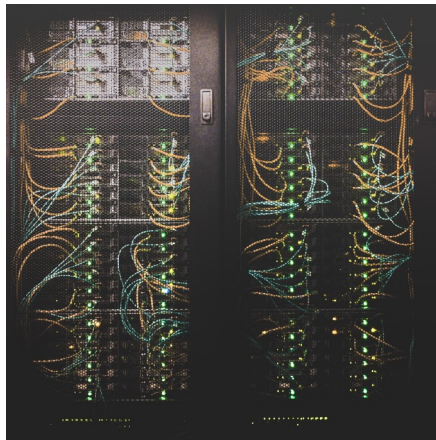
- Physical damage (eg fire or flood)
- Accidental deletion ('oops' factor)
- Hardware corruption (disk failure)

In an ideal world, we would have a perfect copy of all our data off-site, so it is not affected by physical damage at the primary site. That copy would be very up-to-date—so we could easily use it to resume business operations without any significant loss. In our real world, not all backups are off site, nor are they 100% current. Life, as always, is a compromise. You need to explain to IT staff how long a time-window of data you can afford to lose. They can design a backup process to deliver what you need.

Personal backups, to supplement IT backups, can use removable USB drives or network storage. IT backups may be offsite in the cloud or at a remote site. Doing personal backups is inconvenient, but not having them could be a disaster.

Managing Your Data

Without pro-active management, the backup vault will just keep growing. Older data may no longer be relevant but it still takes up space and that costs money. Identifying and deleting it is, of



course, tedious and often ignored.

It is good document management practice to put an expiry date to show when each document will cease to be important. Such dates can then be used to automatically cull stale data. Tax and audit data, for example, is relevant only for a few years. After that it is of no use—but how many years of such data do you still have backed up? Why keep decades of bank statements?

Cataloguing

File names alone often give little information about what is inside. Metadata in storage management systems like SharePoint can help—as long as time is taken to create meaningful descriptions.

Knowing what is where is an absolute must.

Disasters

There is also the issue of major disasters to consider. Here you face a total loss in your main site and a need to rebuild on new hardware.

Security

An important part of managing backups is to ensure that the backup was successful. A corrupted backup is near useless—worse, it gives you a false sense of security. Confirm that your backups are tested.

Cybersecurity best practices dictate that you isolate your backup files from their online versions. A ransomware attack that also corrupts your backups is a bigger disaster. Keep backups securely offline.

Best Practices

Have a plan for what you backup, how and when. Make this plan based on how you might use the backup at some future time. Structure your backups so they can be used when needed, including keeping catalogues of content along with expiry dates to permit useless data to be purged easily.

If you'd like to explore these ideas further or comment on this article, reach me at peter@tmcconsulting.ca.

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Peter, as an engineer & technology management consultant, has developed innovative & cost-effective solutions for clients in many industries.

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Is your office paperless yet? No. You still rely on paper. Despite the growth of electronic records, you use lots of paper for your daily operations. In fact, in many offices there is solid evidence that the growth of paper files occurs as quickly as the implementation of new IT. Often, many vital records are still on paper and without these records, your operations will be crippled. Here's how to keep them safe.



So Much Paper

Your file room contains thousands of files, without which you can't do business. If you were to lose those files, would your organization survive? Think about it. Assume that a fire destroys your file room and its contents. What would be the immediate effects? A month after the fire, could you conduct normal operations?

Of course, many of your records are electronic, and you've backed up your data so that you can access it easily—haven't you? —but what about your hardcopy files? Consider what you might lose in a fire, flood, or other disaster. Your auditors are interested to find out. They might conclude that without its paper files, your organization might be hard-pressed to resume normal operations any time soon. Or you could be out of business. It's possible.

These circumstances are more common than you think, and the results are discouraging.

What's Vital?

Any paper record that is essential to your organization should be considered vital. Some records are obviously vital: incorporation documents, contracts, service agreements, warranties, legal



correspondence, and payroll files. The risks to these records are constant and serious. Your senior management and auditors will ask you to ensure that you've mitigated them with commonsensical measures.

What's the Risk?

Aside from natural risks such as severe weather, flooding, and wildfires, there can be technological risks such as a malfunctioning sprinkler system that accidentally releases a large amount of water in your office and file room. Another risk is human error. A co-worker leaves an office skylight open, and a rainstorm soaks your paper files. In a couple of hours, they could become illegible.

A memorable formula: paper + water = mush.

The Solution

Fortunately, there are practical and cost-effective ways to protect your vital records. You need a well-organized and efficient records management system that safeguards files from their creation to their final disposition. That system should include secure storage, both on- and off-site.

Storage areas should have controlled access and clean, dry, and insect-free environments. Regular pest control will kill paper-chewing insects such as silverfish.

A properly trained records manager should supervise the system so that vital records are preserved for as long as you need them.

Remember, however, that vital records in any medium need protection from the risks that prevail in your organization. The only guarantee is that those risks will always prevail, and you must be prepared to face their consequences if they lead to disaster.

If you'd like to explore these ideas further or comment on this article, contact me at guy@tmcconsulting.ca.

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Guy Robertson is a senior planner at TMC and an instructor at the Justice Institute of BC and Langara College. He has written five books and numerous articles on corporate security and disaster planning, and offered workshops and lectures at conferences across North America and in the UK.

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Follow the Money

Gartner says that while ChatGPT is cool, enterprise uses for generative AI are far more sophisticated ([Generative AI Use Cases for Industries and Enterprises](#) (gartner.com)). They say that venture capital firms have invested over \$1.7 billion in generative AI solutions over the last three years, with AI-enabled drug discovery and AI software coding receiving the most funding.

Here are their suggested top use cases.

Drugs

Most people know that drug development has a long timeline, but AI can change this. In 2010, a study reported that drug discovery cost an average of \$600 Million and took 3 to 6 years. Generative AI has already been used to design drugs within months.

Computer Chips

Generative AI in semiconductor chip design can optimize component placement "floor-planning", reducing product-development time-lines from weeks for human experts to hours.

Materials Science

It can be used to create new materials targeting specific physical properties. The process defines the required properties and discovers materials likely to have those properties rather than relying on good fortune to find a



material that possesses them. Properties could include conductivity, magnetic attraction, corrosion resistance, weight, pulling strength, UV tolerance, etc.

Various industries such as the automotive, aerospace, defense, medical, electronics and energy industries have wished-for materials properties that could save money and improve safety.

Parts Design

It can enable manufacturing, automotive, aerospace and defense industries, to design parts that are optimized to meet specific goals and constraints. These might include performance, cost, materials use and manufacturing methods. As an example, automakers can design lighter assemblies, making cars more fuel efficient.

Privacy Protection

Research relies on the use of real-world data, but using real-world data runs the risk that personal information can be accidentally made public. Researchers have traditionally used techniques to anonymize data but the process runs the risk that the data set will be distorted and trends will be lost.

Generative AI can create "accurate" synthetic data, to mimic the characteristics of the data set while ensuring the privacy of the original sources of the data.

Take-Away

You'll know what to say when a member of your senior management team asks, "what are we doing about AI?"

There are various opportunities to trial the technology and you should. For example, Gartner predicts that by 2025, 30% of outbound marketing messages from large organizations will be synthetically generated, up from less than 2% in 2022. Perhaps you could start with a trial on your self-help intranet site.

If you'd like to explore these ideas further or comment on this article, reach me at roban@tmcconsulting.ca.

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Roban Chahal is the editor of The Advisor, a researcher, and oversees TMC benchmarking studies.