

# HIDDEN TECH

## THE ENEMY OF DATA GOVERNANCE

Can you trust where your data has  
come from? *Prevent, Resolve, Explore.*



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# Introduction

*Hidden Tech* is anything that falls *below the radar* - the stuff that would not appear in an "official catalogue" of your organisation's technology but which is nevertheless a key component of many processes and workflows.



Our capacity for processing ever larger amounts of data in an intelligent way cannot invalidate technology's fundamental rule: *trash in, trash out*. Hidden tech is a place where this vulnerability will run unchecked; ignoring it is like navigating blind or accepting a black-market economy... but what exactly is lurking below the radar?

## Spreadsheets, End-user Applications, Decaying Tech

*Spreadsheets* have the peculiar characteristic of often being used "as systems" whilst not officially being recognised as such. And yet, in some departments, they hold and process a significant percentage of the information managed;

*End-user applications* are, for all intents and purposes, equivalent to "spreadsheet systems": whatever software is used, it is inextricably tied to its creator - cue a consultant or graduate who applies their wizardry to rationalise and automate as quickly and effectively as they move on (from here on, please read "spreadsheets" as "spreadsheets & end-user applications");

*Decaying Tech* is more subtle: yesterday's great system, if not adequately invested-in over time, will become less and *less visible*, *less understandable* in terms of its inner-workings.

Overall, *Hidden Tech* is the enemy of efficiency, accuracy, traceability, security, accountability - to name but a few of the direct effects; more subtly, it can jeopardise morale when people lose trust - with good reason - in the tools and processes they are asked to use every day.

# Prevention

The best way to solve a problem is not to have one in the first place.

With *spreadsheets*, the Swiss Army knife of tech, it can be difficult to determine whether they are ok or not. We tend to work to a simple yardstick that we call the Rule of One:

**“A spreadsheet is fine when ONE person creates, maintains and is accountable for it”**

When it is shared, it is meaningful only to the extent that you trust its owner. In other words, *“many”* and *“spreadsheet”* don't go together: a personal tool will never be a system.

As for *Decaying Tech*, the informing principle is the reverse of a well-known saying: *“if it's not broken, don't fix it”*. Technology is not for the lazy: most of it runs 24/7 in constantly evolving contexts where regular re-assessment should be the norm.

# Breaches

The sheer volume of *Hidden Tech* you would normally find in any large, successful organisation suggests that there may be something positive or even inevitable about it. It's important to remember that for the most part, **this stuff works!** ...*Until it's broken and nobody knows how to fix it.*

The *Rule of One* is easily breached: in any but the smallest of organisations, *many* people need to interact in *many* ways. However, here are two of the most common examples where *spreadsheets* are used and alarm bells should ring:

- **data collection** from many contributors: *who hasn't received an email with a spreadsheet template attached and the request “please fill out and send back by Friday at the latest”?* It's probably manageable as a one-off, but when *many* people are required to contribute on a regular basis, it quickly spirals out of control, making it impossible to manage in a way that is consistent, reliable and frictionless for the participants;



- using spreadsheets as a bridge between two systems, for *data mapping and transformation*: here, one could argue that a few clever macros could save weeks of development whilst maintaining degrees of freedom and flexibility. However, this will always be the weakest link in the chain, with people needing to carry out procedures particularly sensitive to human error for *many* iterations (weekly, monthly, ...).

*Decaying Tech* is more a question of company culture: either there is a discipline of continuous review and investment or not.

The “rise of the Regulator” in the Banking industry over the last decade means that, deliberately or not, there is less and less that you can hide: armies of internal and external auditors will be quick to detect significant breaches; the careless and the lazy will be playing a risky game between the thrill of risking high-impact errors and the threat of closure for non-compliance (there is a rich online literature on disastrous spreadsheet errors).

## Resolution

Even when the most critical areas are covered, *Hidden Tech* will still affect many internal processes and if not acted upon, it will spread like a weed.

Resolution will not happen through one-off efforts but by adopting a set of good practices.

The starting point is about addressing the word “hidden” and bringing everything into plain view. A crucial step is creating an up-to-date inventory of *all* systems, with a clear ownership structure where, in most cases, *spreadsheets* will require a *transfer of ownership* away from the business and into the Technology Department. More pertinently, it would be a transfer of ownership between the individuals that create the spreadsheet and an accountable, functional area of the firm who will be able to ensure longevity.

Technology managers will then be in a position to carry out the necessary assessments on security, accuracy, maintainability and cost vis-à-vis the expected benefits, officially recognising technical debt and planning the next steps accordingly.



When fully brought to light, the technical debt due to spreadsheets, end-user tools and decaying tech can be overwhelming, but it will ultimately fall into one of three categories:

- ditch (where costs/risks outweigh benefits)
- accept the risk (e.g.: non-critical, low frequency, low effort, easy maintenance)
- replace

The first two, akin to de-cluttering and reorganising your bookshelves, will not require further efforts. Replacement decisions, however, will require time and investment and many items will trigger the "build vs buy" dilemma.

## **Build vs. Buy, chore vs opportunity**

The very nature of what needs to be replaced, i.e.: the end user's "original artefact" or an obsolete piece of tech, would suggest that we are in "build" territory: *Hidden Tech* is often born as a "local add-on" to a core system where, for whatever reason, it was not possible to integrate the functionality or because there was no product. *If it could not be "bought" then, chances are it can't be now?*

In reality, by definition, *Hidden Tech* items likely never went through any formal evaluation process, either because their creator "just wanted to get on with it and could" or because the Technology Department did not have the bandwidth to deal with the sprawling landscape of user needs. From this viewpoint, the presence of *Hidden Tech* could be a tell-tale sign of capacity issues – and if there are capacity issues, the sudden appearance of a "build" program to replace many items of varying size and complexity may turn out to be a big (if not impossible) chore.

Conversely, the right external vendor will see a big opportunity... *here's a chance to make a difference for a customer!* The "buy" option could then be a true win-win, a way for the Technology Department to solve a problem while exploring new technologies from the outside world – where you will find companies entirely geared to assist with this kind of process upgrades.



# Conclusions

In a world where data is used more and faster every day, demand for technology constantly grows. If capacity is not well managed, *Hidden Tech* will naturally proliferate and, with it, the bad data that undermines the effectiveness the processes we have come to rely upon, sometimes with disastrous consequences. Prevention and resolution is possible but requires positive action; the (r)evolution of Cloud Services infrastructure, distributed computing, delivery methods mean that high-quality services are easily found externally to complement internal efforts.



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