Ultra Corporation

# Why Your Data and Analytics Project is Failing and How to Make it a Success!


[ChatGPT's best attempt at creating the word "Engagement" using Scrabble tiles!]

# Introduction

The world is awash with data and analytics projects, all seeking a silver bullet leading to better results, greater profits, or whatever. The problem is that most of these projects fail!

I've seen many quoted statistics regarding actual failure rates, ranging from "over 40% failing to deliver any measurable benefits to "over 90% failing to deliver the expected value." Of course, failure rates are very hard to track and often underreported, as no self-respecting project manager or COO is happy to report their project as a failure. So why do these projects tend to fail?

Generally, it has nothing to do with the chosen technology stack. Budgets and resources are rarely an issue either. Skills and experience are not usually a problem. There is, however, an almost universally overlooked factor that significantly contributes to the success and failure of these projects - engagement.

# TL;DR (aka Executive Summary)

**Why projects fail:**

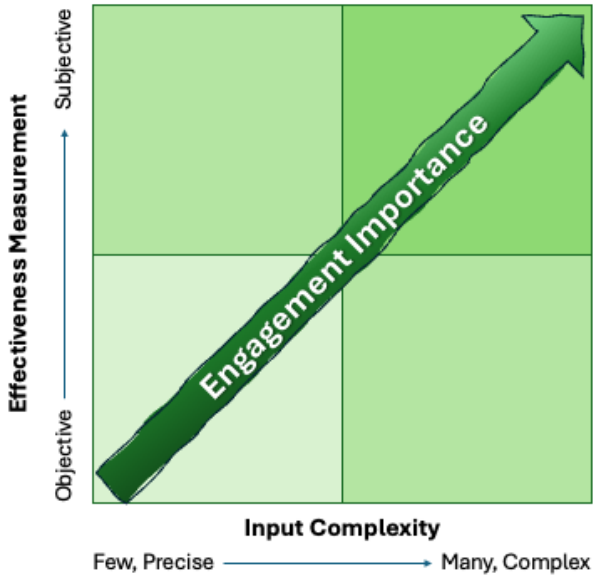
- Most projects focus on analytics, rather than measurable benefits
- Analytics act as a "diagnosis" but performance improvement requires a "treatment plan"
- Focus switches to the analytics and away from the outcomes
- User engagement is hard to source
- Inadequate team structures and weak governance cause additional friction

**How to succeed:**

- Identify measurable benefits that would arise from a successful project
- Engage relevant stakeholders and make them accountable for the desired benefits
- Establish a cross-functional team with authority to act
- Ensure regular assessment of both the ongoing analytics and the outcomes

# The Importance of Being (Earnest) Engaged

It's easy to lump all data and analytics projects together as one unit. It's just as easy to subdivide them into ever smaller categories, effectively removing any comparison. The reality is that different projects have different degrees of complexity, and the engagement required to be successful similarly varies. I'm going to offer a relatively straightforward way of assessing this, based on the inputs and outputs.




Some projects are easier - you can measure the "what" - data that is often accurate and readily available, and that can be used for optimisation i.e. the inputs are fixed and rigid or can be easily derived. These don't require a significant amount of user engagement.

An example would be a production line machine churning out thousands of widgets, where you can measure how many widgets are produced in a day, count rejected parts, assess quality, etc. To evaluate if a particular change is beneficial, make the change and compare the new stats with the old, and you have created a feedback loop. Of course, the results may show improvement, but the required changes could be costly and not worth the implementation effort.

Another example is identifying cancers from mammograms or infectious keratitis from corneal images, where AI models now outperform skilled humans in identifying these diseases. Here, the inputs are more complex but highly repeatable, and there is an objective measure of assessing the results. Although the output is a diagnosis, it has an associated confidence level. Input is required from a specialist clinician to review the AI assessment and make the ultimate decision on further tests or treatment.

As you move to projects that help people to become more effective at doing their jobs, where they have the freedom to make decisions, you must understand the "why" - their decision-making rationale. Compared to a manufacturing process with only a few options, the human brain considers a myriad of factors, making heuristic decisions skewed by the emotions of past experiences and the desire for future success. It is also difficult to objectively assess outcomes, particularly in a "noisy" environment.

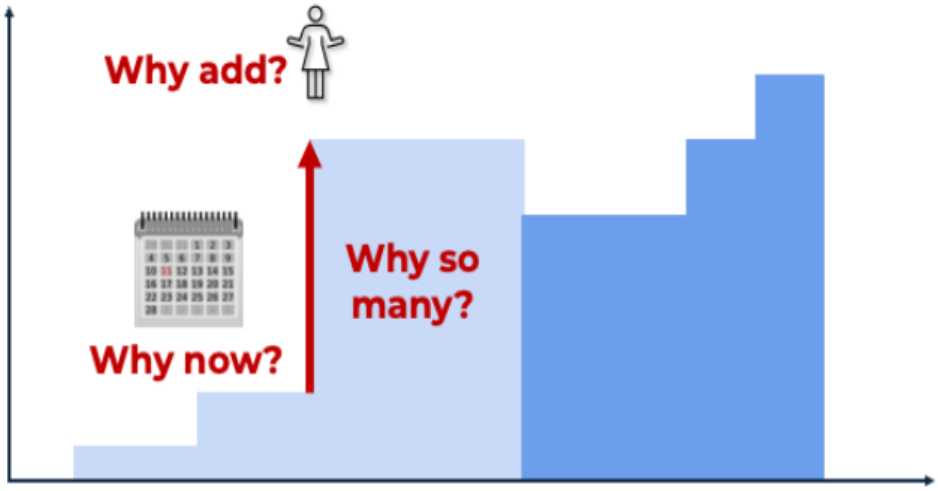
The good news is that there are environments where outcomes are easier to measure, for example, in the world of sport, did you win more matches/run faster/score more points? Or, as a trader or investor, did you make more money than alternative approaches?

In these more complex examples, engagement is absolutely essential at every level.

# End User Engagement

Engagement is required at all levels for a successful project, but let's start with end-user engagement - arguably the hardest to source. I'll use an example from my own professional experience…

Let's say we want to look at the effectiveness of the decisions taken by a portfolio manager. Clearly, a huge business benefit can be obtained if the manager can improve the effectiveness of their decisions. So, how do we assess this?




We can start with easily accessible data - their trade history (described as the "what" in my previous post) and look at each trade to determine if it added value. The problem is that a single trade lacks statistical significance and is subject to noise, so it would make sense to group similar trades. For example, we could look at times when the manager buys more shares of a stock they already own. We could use this data set to analyse whether adding is generally a good decision by comparing it to not having traded, or comparing the resulting performance against the market. Based on the model from my previous post, end-user engagement is not critical at this stage as the inputs are few and precise.

We can perform a more granular analysis by sourcing additional data that allows us to compare adding to winning positions vs. losing ones, or adding to European stocks vs. North American stocks, or small-cap stocks vs. big-cap stocks, etc. This builds on the previous analysis, but there are still few inputs and we are only considering the "what" - to maximise the value of our analysis, we need to understand *why* decisions were taken.

So why might a portfolio manager add more shares of a stock he already owns? New research highlighting potential future performance, macro reasons such as tax changes or economic factors, stock-specific news about new products or sales in key markets, quantitative analysis of price movements or company fundamentals, etc. Many complex inputs are considered and, going back to the model from the previous post, this highlights the importance of end-user engagement.

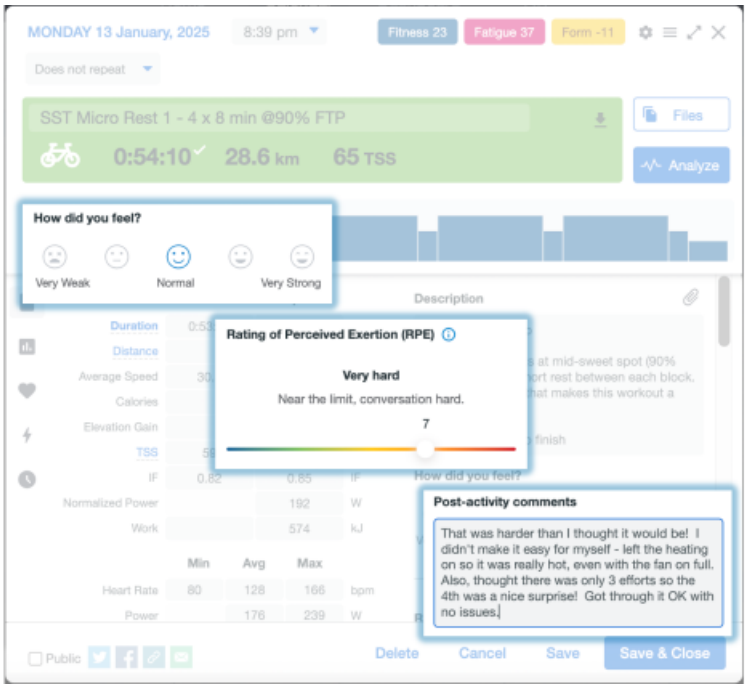
We could also go further with the analysis - these decisions weren't taken in the dark, so understanding the environment would also help. For example, does the manager work alone or in a

team? Did the rest of the team agree with the decision, or was there some dissent? How confident is the investor in this decision? If the manager can understand in which circumstances they make good and poor decisions, they can adapt their process accordingly.

These questions relate to the “why” instead of the “what” and cannot be sourced without end-user engagement.

## What’s in a nudge?

A prompt for someone to take action is usually referred to as a “nudge” after the 2 million-selling 2008 book called “Nudge” by Nobel-prizewinning behavioural scientist Richard H. Thaler. Nudges can be in the form of a smartphone app alert, a triggered email, an embedded step in a systematic process, manual intervention, etc.




Here’s an example from my personal life. I’m a keen amateur cyclist with a coach who sets my weekly training plan, combining indoor workouts with outdoor rides. I have gadgets to track my heart rate and power output and after each ride I am prompted to complete three questions about my activity. The image in the header shows the responses I recorded to last night’s workout - how I felt overall, how hard it was and free text to record notes that my coach can also view. I use an application called Training Peaks for this, which alerts me via an app on my phone and an email after I finish each ride.

So what happens if I don’t complete the questions after my ride? In reality, nothing! My data set won’t be as good and my coach won’t know if I found things easy or hard, but it’s on me to keep things up to date.

The challenge in the business world is to design a nudge process that suits the specific user community yet optimises the information capture with the completion rate. Ask too many questions

and they won't be answered, ask too few and the responses may not be useful enough. In my opinion, failing to get this process correct is one of the major reasons why analytics projects fail - not enough analysis of the “why” to go with analysis of the “what” makes it hard to devise a treatment plan.

Here are a few things to consider when capturing user intent via a nudge process:

### Effort Required

In my cycling example, I complete 2 single-click questions and one where I can add freeform text. That seems reasonable to me - the effort is low and, if I am lazy, I can write almost nothing in the text box or ignore it altogether. The results are sufficiently useful, and I'd be happy to add a fourth question to the mix!

There are two specific things to consider: how many questions there are and how often they are asked. Generally, more than 4 or 5 questions are too many if they need to be completed frequently. For example, a trader making dozens of daily trades could end up with hundreds of questions, which is too many. On the other hand, a mortgage processor completing a couple of loans per day could easily answer more questions.

### Blocking

Generally, it’s a bad idea to block a time-critical process to source decision context. Going back to the trading example, if responses are mandated by the system before executing a trade, this could impact the ability to act quickly in a fast-moving market. In this case, it would be better to seek responses after the time-critical actions are complete.

One option is to batch up responses until the users are more likely to be engaged - the end of the day, or a weekly team meeting, for example. Decision context rarely needs to be sourced at the same instant as a decision, but care should be taken to avoid delays such that responses lack accuracy due to the passage of time.

### Optionality

It is always a balance to make completion optional or mandatory. When completion is mandatory, a risk is that users view these extra steps as cumbersome and become less engaged in the process. As we have discussed, engagement is key!

I work with one client that has a behavioural scientist working alongside the trading team. Their job is to manually collect context data about trading activity using a form completed in consultation with the traders. They can pick a convenient time to meet each trader and are respectful of other commitments they may have. This results in a high level of engagement and the human involvement gives the potential to identify other focus areas that can be examined in the future.

### Individualisation

Every user is different and your process should respect that. I have worked with clients who would happily complete a dozen questions every time they did anything and others who would rarely complete a single reason code choice. The upshot is that you might capture different information from each user, but this does not typically interfere with any cross-comparison - you already have most of the underlying data you need to do this. The unique user data is about them as individuals and represents their unique opportunity to leverage it to improve their performance.

There is no right or wrong here, but a rigid process that does not respect the users is likely to fail.

### Assessment

A major challenge with any analytics project is determining who presents any findings to the users, especially if the findings identify shortcomings and room for improvement. Results presented by a junior analyst, say, may not always be taken credibly by users. Likewise, if the CEO or other "Head of" presents the findings, the user may become defensive and less open to hearing constructive criticism that could improve their performance.

The best profile is someone external to the firm, thus avoiding any internal politics, and has a professional career in the same field as the user. For example, a portfolio manager is much more likely to respond to feedback from another portfolio manager.

To conclude, there is no "one size fits all" when taking your data and analytics and turning them into a programme of continual improvement.  Hopefully, some of these pointers will help with your projects...

# Organisational Engagement

It is critical to offer low-friction ways to involve users in key parts of the process, like intent capture. There is, however, another area where engagement is a key contributor to success - organisational engagement.

Organisational engagement can be defined as the alignment of stakeholder interests. The required alignment can take different forms, depending on who is driving the project, the range of stakeholders involved and external pressures. Perhaps the most obvious engagement challenge is when an external vendor provides the technology or service.

### External Vendor Projects

These days, it is rare for external vendors to be selected without involving technology and information security teams. Generally, the vendor technology platform will be assessed from the perspective of integration (data interface formats, APIs, service levels, etc.) and the vendor's information security posture will be assessed from the perspective of data leaks, cybersecurity, access controls, etc. In particular, certifications such as SOC 2 and ISO 27001 effectively offload some of this assessment to external auditors.

The aspect that is generally overlooked is the business knowledge of the vendor team. The sales team will often include subject matter experts, such as product managers, but care should be taken to understand their involvement in the ongoing service delivery. For common software delivery projects, such as trading systems, risk management tools and accounting platforms, the vendor need only supply business expertise during the implementation phase, and these resources are rarely required beyond the go-live date. In data and analytics projects that require ongoing input from the vendor,

securing the commitment of suitably skilled resources is paramount. Ideally, the vendor employs staff who have previously performed the exact job undertaken by the business users.

### Technology-Led Projects

Technology-led projects have a poor track record of success when delivering to business users. Successful projects generally require a significant amount of end-user involvement on an ongoing basis, and these resources are often scarce. Too often, there is a chasm between the business and technology that leads to poor communication of objectives, timescales, obstacles, etc.

There is a set of projects that often work well, which is where the user community is also the technology team. These are usually projects that attempt to improve efficiency, automate inefficient processes or provide progress analysis to management.

### Business-Led Projects

When projects are business-led, they often struggle due to a lack of project management skills, resulting in scope creep and even significant changes in objectives. One client I worked with at Essentia had previously tried to develop an in-house solution. The portfolio managers wanted to analyse their investment decisions to help identify bias. Shining the spotlight on your decisions triggers natural biases about exposing yourself to scrutiny. This became evident as the project progressed, with a huge focus pivot resulting in no significant analysis of investment decisions, but a set of quantitative analytics being produced aimed at helping identify the best stocks to invest in. This duplicated work that was already being undertaken by the research team and missed an opportunity to assess and improve decision-making, which could have led to better performance.

### Cross-functional Projects

For many firms, the way to ensure engagement and resulting project success is to establish a cross-functional team with representation from all aspects of the business - the end-user community, the “project office” (or equivalent), technology, a CFO representative (for significant projects), etc. At face value, this would appear to be the golden ticket, and it absolutely can be with the right project governance and executive support.

Unfortunately, I have witnessed firsthand scenarios where each representative has a different idea of the project objectives and constraints. There is nothing wrong with having differing objectives, provided they are clear, visible and can be aligned.

For example, a project to introduce automation via a new system could easily support: the business users gaining access to new functionality, the CFO reducing overall costs, the compliance team seeing fewer errors and the technology team managing more efficient data feeds. Four different goals from different teams, but crucially, they can all be achieved with a single project.

This alignment rarely happens without deliberate efforts, usually from a CEO-appointed programme manager, with the ability to make priority calls and sufficient authority to guide the project towards the objectives.

**About Ultra Corporation**

Ultra Corporation is a Go-To-Market consultancy for financial technology firms.

Its founder, Robin Strong, has 30 years of hands-on market experience and is author of the firm's proprietary framework, ***SMP Concerto***. This framework is designed to help financial technology providers structure their Sales, Marketing and Product teams for growth, regardless of their business maturity.

Specific areas of consulting expertise include sales strategy; sales coaching and mentoring; product marketing; lead generation; product strategy, user engagement and organisational structure. Services are delivered via consulting engagements and interim appointments.

Ultra Corporation is based in London and has a global client base of FinTech vendors, investment managers, consultancies and venture capital/private equity firms.

For further information, contact:

Robin Strong | robin@UltraCorporation.com | linkedin.com/in/RobinStrong