Push vs. Pull: How ReaDI-Watch Captures Both Sides of Innovation

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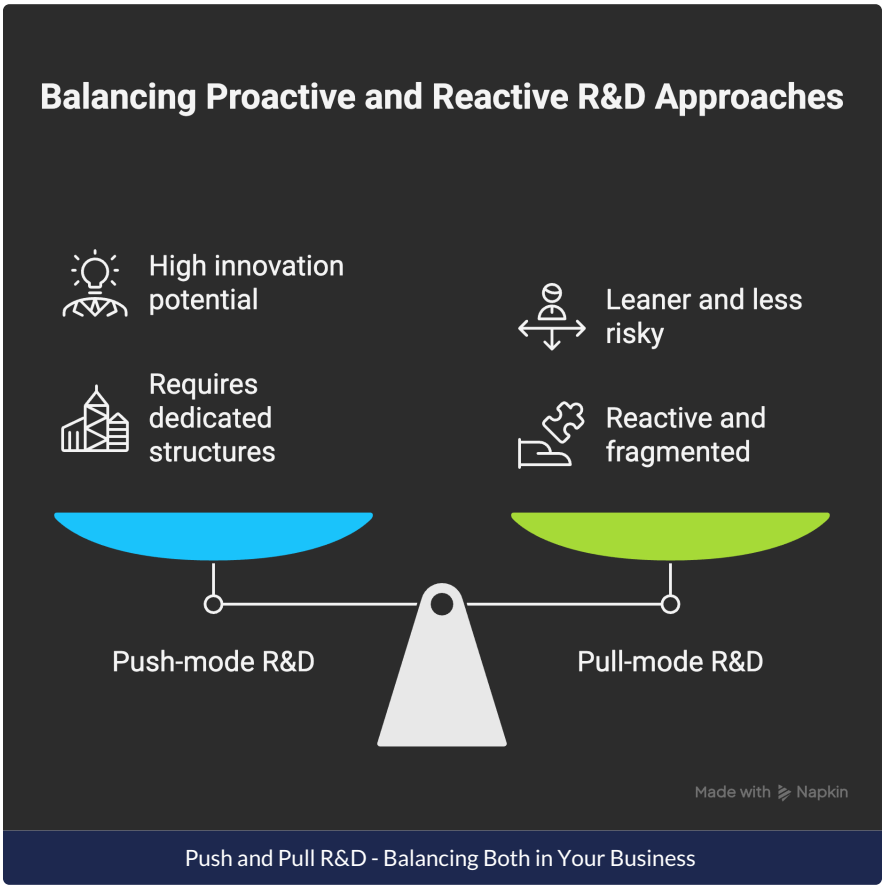
R&D doesn't (and shouldn't) emerge from a single source in your company. It is either *pushed* internally by champions driving deliberate innovation or investigation, or *pulled* through the course of delivering complex products or services to customers.



Push and Pull R&D - Balancing Both in Your Business

In engineering, a push project might involve a team exploring a radically improved optical vision system to meet future performance thresholds, clearly scoped and well resourced. But valid and potentially qualifying R&D can also surface during delivery. For example, when unanticipated failures occur during a custom tooling deployment, they may require iterative experimentation with materials, tolerances, or design logic.

In software, pushing might mean building a new platform capability from scratch, while pulling might involve overcoming scaling and latency challenges uncovered during the integration and interoperability of two legacy systems. In both cases, meaningful technological uncertainty is present.

Both types of R&D can give rise to valid and potentially qualifying R&D under tax or regulatory definitions. The key differentiator is the organisation's ability to detect, document, and support these activities in real time.

Push R&D	Pull R&D

Push R&D is proactive and intentional. It is initiated by internal champions who identify a technological opportunity or unmet performance threshold and seek to address it through structured investigation. These initiatives are often scoped in advance, backed by dedicated resources, and explicitly recognised as R&D.	In contrast, Pull R&D is reactive and embedded within the execution of customer-facing or delivery-oriented projects. It may arise during the integration of new systems, the resolution of unforeseen failures, or the adaptation of core technologies to meet specific delivery constraints. This work often involves experimentation, technical iteration, and the resolution of uncertainty, but it is not always formally labelled as R&D. Because Pull R&D is driven by delivery timelines and operational demands, it may be under-resourced and difficult to isolate from routine engineering.

Case Study: Dual R&D Pathways in an Industrial Automation Firm

Company Profile
A mid-sized engineering firm designs and manufactures custom automation solutions for high-throughput manufacturing environments. The company serves both multinational clients and domestic manufacturers, with a mix of standard products and bespoke systems.

Push R&D Example: High-Speed Pick-and-Place System
The engineering team identified an opportunity to improve their existing robotic arm technology by increasing precision at higher speeds. A dedicated internal project was launched to explore new control algorithms, lighter materials, and low-latency feedback systems. The project was champion-led, formally scoped, and resourced over six months. Key technical challenges included minimising vibration at peak acceleration and optimising sensor fusion algorithms. The outcome led to a new product module and a patent application. This was a clear case of structured, proactive R&D with well-documented advancement and uncertainty.

Pull R&D Example: Custom Line Integration for a Client
During the delivery of a bespoke assembly line for a pharmaceutical client, the integration team encountered repeated failures in component alignment due to the client's unusual packaging material. The team initiated a series of rapid tests and modifications, experimenting with guided rail tolerances, temperature-controlled material handling, and adaptive machine vision calibration. These changes were not part of the original project scope but required iterative technical investigation under time pressure. Although not initially recognised as R&D, this work met the criteria for technological uncertainty and advancement. It was later documented and included in the company's R&D tax submission after a retrospective technical review.

Strategic Impact on your Business

Both Push and Pull R&D offer distinct strategic advantages and limitations. Push initiatives allow organisations to set direction, build proprietary capabilities, and pursue long-horizon innovation, but they require upfront investment and may lack immediate commercial validation. Pull R&D, by contrast, is grounded in real-world constraints and customer needs. It tends to be leaner, faster, and more directly tied to revenue, but is harder to structure, scale, or recognise as R&D unless systems are in place to capture it.

A resilient innovation strategy does not favour one mode over the other, it enables both to function in parallel, with mechanisms to surface, support, and align them with the organisation's goals.

Are we Pushing or Being Pulled?

ReaDI Watch

Pull

The model used for "Pull" RD&I is to react to either customer requests or market developments and to establish projects as required. In this model there are few Innovation processes such as ideation, selection, prioritisation etc. required. IP is usually passed to the customer, or in the case of a market development may have already been protected. This is deemed Reactive development and has much less risk or financial burden.

- Does not require the same level of budget (projects usually funded by customer)
- Projects are normally linked with sales volume
- Can be ad-hoc resulting difficult (lumpy) resource allocation or availability
- Usually will not result in IP for the company
- At the mercy of your customer base for projects and technical advancement
- There is little for the commercial team to use within the market

Push

The basis behind "Push" RD&I is that an internal core engineering / design team will develop products or services to launch within the market (pushing out products to the market). Often valuable IP can be created and protected providing a unique solution which can attract new customers. This is deemed Proactive development and is much riskier and requires higher levels of funding, but usually returns higher levels of revenue.

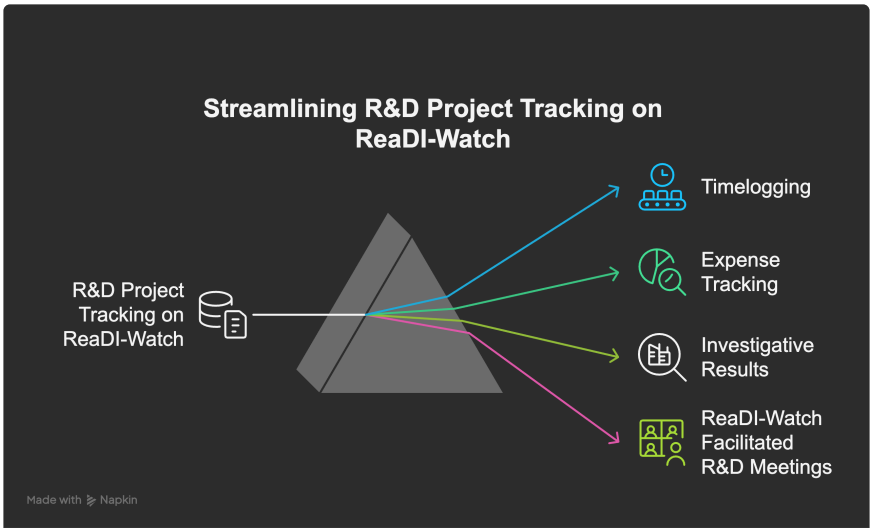
- Requires RD&I Budget
- Needs the correct business structure (project leads etc.)
- Needs ideation processes and robust selection criteria
- Needs to follow a ratio (Golden ratio – 10%, 20%, 70%)
- Needs top down support
- Needs staff buy in
- Must be prepared and willing to fail

Target should be a combination of both. A hybrid business model is required and 3rd party resources should be considered.

Extract from Executive R&D and Innovation Training Programme, ReaDI-Watch

Measuring, Managing and Tracking R&D

In order to answer the question: how much are we spending on "qualifying R&D" for R&D tax credits, one must develop a way to measure (and manage!) the R&D that arises in both push and pull-style R&D projects. ReaDI-Watch simplifies this process.



Streamlining Project Tracking on ReaDI-Watch

In ReaDI-Watch platform, the approach to R&D project tracking can flex to suit the needs of the business.

ReaDI-Watch Platform Tracking	How its Captured - Push R&D	How its Captured - Pull R&D
Time-Logging	Weekly R&D Project Time-Logs on ReaDI-Watch	Extracted from ERP system job tracking (engineering) or Jira (software) epic tracking

Expense Tracking	Budgets set, R&D expenses tagged and tracked vs budget, invoices uploaded to ReaDI-Watch	Expenses extracted from ERP job tracking
Investigative Results	Uploaded to ReaDI-Watch directly	Extracted from Customer Job shared drive folders and/or Jira Epics
ReaDI-Watch Facilitated R&D Meetings	Periodic meetings, either sequenced regularly throughout project, or aligned to key project milestones.	Monthly R&D meetings where multiple ongoing jobs are discussed.

See our article on "Facilitated R&D Meetings" - this is where we gather the development journey, insights, trials, experiments, successes, failures and more - which forms a rich part of our R&D project data-set.