Agile ERP:

Continuous Improvement Through Rapid, Incremental Implementation and Value Realization



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Agile ERP Implementation

The Little Bang Theory

Big bang ERP implementations are out. Rapid, incremental 'little bang' implementations are in. Leading edge software engineering organizations have embraced agile development principles for years, based on rapid, incremental releases.[1] It's about time ERP implementers learned and adopted similar principles. As the speed of business increases every year, companies can no longer tolerate long, expensive, enterprise software implementations. *Now* is the time for Agile ERP Implementation.

Agile Implementations Build Value Incrementally

Technology is often best absorbed in bite-sized chunks. In the same way that agile startups seek to ship the *minimum viable product*[2] as soon as they are able, agile business seeks to implement the '*minimum viable implementation,*' to speed time-to-value. From that foundation, they make adjustments and add capabilities in ongoing, rapid, incremental steps.

Continuous Improvement Throughout the Lifecycle of an ERP System

With Agile ERP, a business continuously improves. It implements small but meaningful improvements at a frequent cadence. These include continually improving and refining processes and keeping up with the latest functional and technology improvements (big data, mobile, analytics, and so forth). This requires an ERP solution that is architected to provide a continuous flow of upgrades and improvements *without disrupting the business*. In contrast, for ERP systems designed around big bang implementations, the initial experience and upgrades are so painful and disruptive, that it is literally years (in some cases a decade or more) between upgrades and hence companies lag further and further behind their competition (see Figure 1).

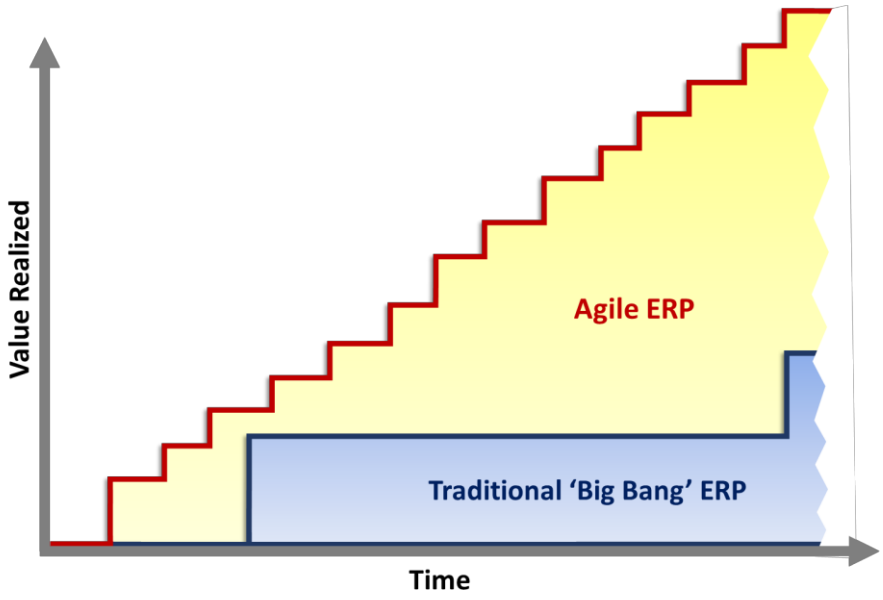


Figure 1—Value Realized by Agile ERP vs. Traditional Approach

[1] Agile software development principles include things like continuous frequent delivery of working software, daily face-to-face cooperation between business people (the users of the software) and developers, simplicity (focusing only on the essentials), and continual course adjustment.

[2] A minimum viable product (MVP) has just enough features to allow the product to be sold and used by early adopters in the market, thereby enabling the developers to conduct field-validated learning at lower cost and risk.

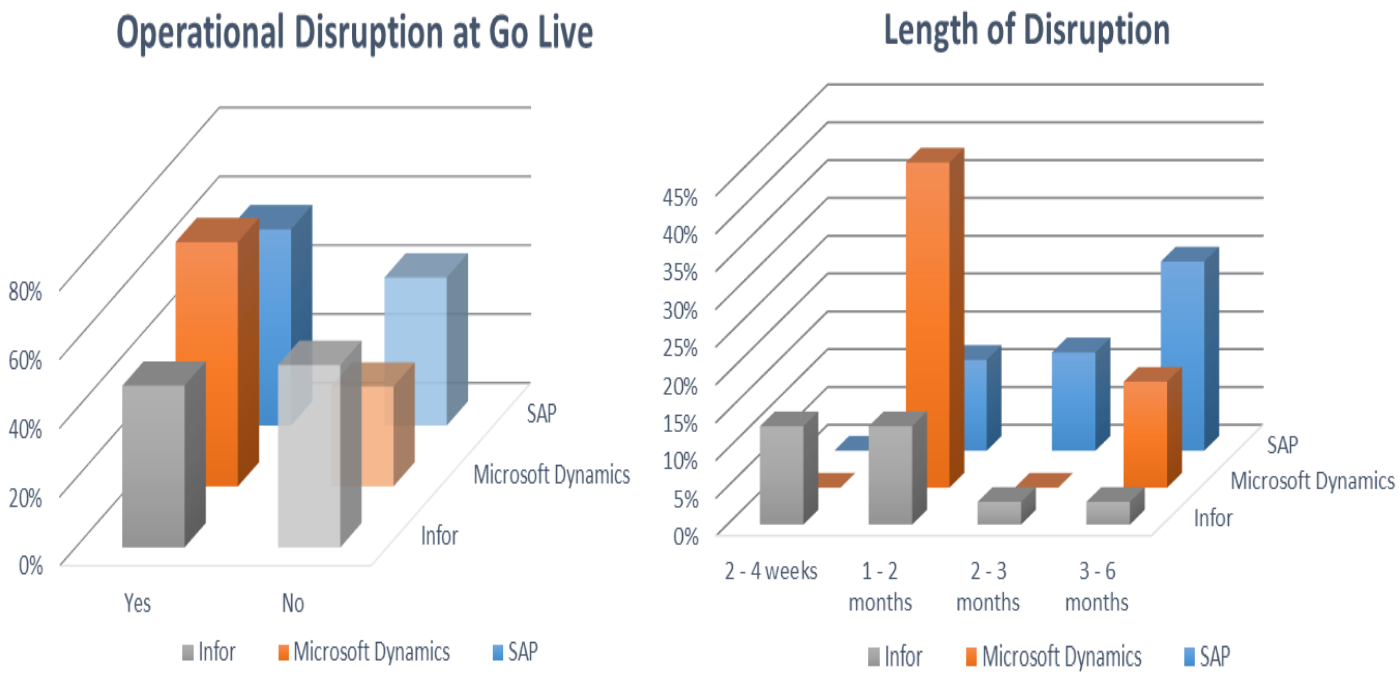
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Going Live vs. Realizing Value

It's not enough to turn on the ERP switch and declare victory. The critical goal for a company is having a system that is useable, the business's processes and people executing as they should, and the solution is creating value for the firm. Sometimes the go-live is just the beginning of a painful period of trying to make things work; in a few cases companies have not even been able to ship product after turning on the switch (See sidebar, *Going Live is Not Enough!*). Some research has shown that 50%-75% of the ERP implementations from major solution providers cause operational disruptions at go-live and that disruption often lasts for several months.

Going Live is Not Enough!

Many years ago, I was a department manager at a large multi-national firm. We implemented a major ERP system in nine months—at the time, the fastest implementation *ever* of that solution. While the consultants were busy patting themselves on the back, I stopped receiving the monthly budget reports that I had been receiving for years under the old system. These reports told me how much I was spending in my department and what it was being spent on (including contractors' fees and payroll). It took another *nine months* before I started receiving those reports again, during which time I was 'flying blind,' not knowing what our department was spending or whether we were over budget or not. For me '*going live*' meant *going dead* as far as my visibility into spend![3] One of the reasons it took so long for the IT folks to get around to fixing our department's problem was that they were busy fixing more critical issues that were preventing us from shipping products!



Source: *Clash of the Titans*, Copyright © 2015 Panorama Consulting Solutions

Figure 2—Majority of ERP Implementations Experience Disruption at Go-Live—Disruption Can Last Months

[3] Thankfully I had several years of experience in that position when the ERP system was implemented, so had a pretty good feel for what I was spending and was able to stay within budget as a result. It could have been much worse had I been a greenhorn manager!

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Industry-specific 'Successful Practice Blueprints' Accelerate Implementation

ERP implementations take longer when they are initially installed as a 'blank slate' that can be configured to 'do anything you want.' That often requires a tremendous amount of work and time creating the different roles, screens, reports, workflows, system configurations, mappings, and customizations to make the system work as desired. Furthermore, in some cases, the customizations cause trouble during upgrades—the system breaks or requires extensive new debugging and rewriting of customization code. As a result, customers may delay badly needed upgrades for years.

One way to solve this 'last mile' problem and get up and running more quickly is by using industry-specific *successful practice blueprints*. These blueprints are comprised of industry-specific configurations, based on past successful implementations, including things like system-to-system data mappings, user roles, and role-specific workflows, business rules, dashboards, reports, and analytics. Together these capture the practices and particular way of doing business that have proven to be successful within specific industries and sectors.

Creating effective industry-specific blueprints requires that the ERP solution provider has many years of experience doing implementations out in the field within that specific industry, learning what really works and doesn't work in real world scenarios. Implementation also benefits a lot if the solution provider has a large, deeply engaged user community within that industry that actively helps one another, with online and in-person mechanisms for asking for and sharing advice and knowledge about implementing.

This pre-built blueprint approach can shortcut a tremendous amount of upfront configuration and setup work, as well as making it much more likely that things won't be forgotten in the process. The industry-specific blueprint is a key enabler of rapid initial implementation and the agile ERP approach.

Lengthy, Costly Implementations

Implementations for major ERP solutions take an average 1½ to 2 years, with total project costs from $1.7M to $2.7M according to Panorama Research.[4] They report the following average times and costs for ERP implementations in 2015:

- SAP—19.5 months, $2.2M
- Microsoft Dynamics—24.9 months, $1.7M
- Infor—16.2 months, $2.1M

How NetSuite Develops 'Successful Practice Blueprints'

When creating industry-specific blueprints, NetSuite started first with Wholesale Distribution, the industry where they have the most customers and the longest experience. To identify successful practices and processes for the blueprint, they focus on those customers who have achieved the most and done the best with their ERP implementation. From those successful implementations, NetSuite finds and identifies success-yielding practices and processes to configure into the blueprint; the roles, reports, dashboard, process workflows, and so forth. They draw from many resources to find this knowledge:

- NetSuite's professional services team with tens of thousands of hours of experience implementing wholesale distribution systems.
- Statements-of-work (SOWs) from the most successful implementations, with all of the very specific process knowledge embedded in them.
- Observations of how successful customers were while actually using the system.
- Observations from the sales teams.
- Interviews with existing customers, the best of the best, asking them how they did things.

The team that built the blueprint were not theorists, but people who have done many, many implementations. The Wholesale Distribution blueprint took thousands of hours of configuration work to create.

[4] Source: Panorama Research, *Clash of the Titans 2016*, survey of 519 implementations for SAP, Oracle, Microsoft, Infor.

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Figuring Out When and What to Customize

No blueprint can deliver 100% of what every customer needs. It is important that the system can be easily configured and, as needed, customized in a way that survives any future upgrades without disruption. Some SaaS ERP systems, such as NetSuite, have been designed with this kind of future-proofed customizability in mind.[5]

But just because a customization *can* be done doesn't mean it *should* be done. Some companies moving onto a new ERP system want to customize the software to make the system work just the way they currently do things. That is almost always a bad idea. For one thing, it is definitely *not* agile, as it will greatly extend the initial implementation cycle, requiring much customization of the system. More importantly, it misses a rare opportunity to move the organization forward to best practices.[6] There is even less excuse if the ERP solution provider, as NetSuite has done, has taken the knowledge and insights it gained through thousands of implementations with others in the same industry and embedded that into the pre-configured blueprints they have built. Leveraging this knowledge is an opportunity for most organizations to realize dramatic improvements.

This, of course, does not mean there is no place or right time for configuration or customization of these pre-built blueprints. Companies can evaluate their processes and needs against the blueprint and identify areas where customization is *really* justified. These customizations do not have to be in the first release (remember, it is a *minimum viable release*). The core system can be put in place and then improvements made in a series of increments.



[5] Upgradeability is critical for a true SaaS system (i.e. a single instance, multi-tenant architecture) where everyone is sharing the same codebase, and system upgrades happen for everyone on that instance at the same time. Having customizations crash when an upgrade happens would be a disaster, so these providers need to take great pains to ensure survivability of customizations. NetSuite's customers depend heavily upon customizations, having implemented tens of thousands of them and successfully gone through scores of upgrades. This track record means the system has been thoroughly battle tested, creating a very high confidence that customizations, done right, will survive upgrades without a hitch.

[6] In most cases, moving to built-in best practice processes will be an improvement over a company's existing process which they often want to keep because '*that's the way we've always done it.*' Existing processes usually have grown haphazardly from a series of arbitrary historical decisions, rather than a deliberate process design, based on successful practices, repeatedly proven out in real-world settings. As one CIO succinctly put it, "*I'm through with automating bad processes.*"

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The Value of Agile Engagement from the Start

Businesses may struggle in figuring out which customizations are truly needed and when it is better to adapt their business to use the blueprint. They often overestimate what they need in their first minimum viable ERP implementation and/or focus on the wrong pieces[7] first. This is where leveraging the solution provider's experience can be valuable, especially for those initial decisions. To ensure that good critical roadmap decisions are made, it is important that an agile ERP approach starts right from the beginning of the sales cycle with the ERP solution provider/implementer.

A good example is the SuiteSuccess program from NetSuite. They start with a half-day meeting of all key stakeholders, including representatives from all departments that will influence or be impacted by the system. Crucially, the meeting also includes the professional services team from NetSuite that will be responsible for actually doing the implementation. They do a step-by-step walkthrough of all the major processes in the blueprint to reach consensus with the key stakeholders that these will work for the business as preconfigured.

Helping the Resource Constrained Organization

Smaller companies usually have constrained resources, few or no dedicated IT personnel, and lack of technical expertise within the firm. Their employees wear many hats and their time is very constrained, with little or no time to work on implementing, testing, or learning a new system. They barely have time to do their 'day jobs.' These same challenges are faced by many larger companies as well. A blueprint approach, with an experienced, knowledgeable, supportive solution partner can help resource-constrained firms quickly implement and start realizing value.

Any areas where the prospective customer wants to do things differently are identified and discussed to reach a mutual decision on whether a deviation from the blueprint is really going to add value, and if so when in the roadmap it should be implemented. Often the professional services team will then put together a demo, to show the prospect exactly what the system will look like. In this way, clear alignment of expectations about precisely what will be delivered is achieved very early in the process … even before the deal is closed. This is a key aspect of the success of Agile ERP—*getting alignment early and often*. The team uses the Scrum methodology throughout the sales cycle and implementation to continually keep the customer aligned with what they are getting. No big surprises at the end!

This kind of early engagement also helps the prospective customer to see whether the solution provider truly understands their business and industry, and gives them a chance to see the provider in action, observing how they work through the issues. A good solution provider continues to be an ongoing strategic partner throughout each stage of their customer's journey.

[7] Frequently businesses want to implement non-core capabilities first. For example, the business may want to start by putting up a warehouse management system or an e-commerce site. However, without a foundational core ERP system in place, it is hard to maintain the clean, complete master data (customers, products and product-related content, suppliers, etc.) required to get value out of other systems. Furthermore, the core ERP system is needed to automate transactions, provide the system of record, and reduce rekeying of data between systems. These are lessons that a good ERP implementer has already learned and can help create a proven implementation roadmap that fits the business's needs, goals, and current situation.

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Speeding up Data Loading, Cleansing, Enriching

Usually, existing data is incomplete and contains many duplicates and incorrect data, especially for companies coming off manual systems.[8] Cleanup and enrichment/completion of the data is a critical part of implementation. The amount of time it takes to clean up the data and the effectiveness of the process are an important factor in the time-to-value equation. When these take a long time, it can dramatically reduce how agile the implementation really is. Therefore, the data loading, mapping, cleansing and enriching processes, tools, and resources that a solution provider brings to bear will have a significant impact on the implementation time, as well as the usability of the system.

Change Management, Training, and Adoption



Change management is critical to the success of any new system. Frequently the amount, intensity, and repetition of change management outreach required is dramatically underestimated, leading to low, slow, or no adoption, and in some cases outright rebellion. An agile, continuous improvement approach adds another layer of change management, especially for companies not used to working at that kind of speed or approach.

Change management can also be done in an agile manner: bringing the front-line users into the process from the start, providing education of new concepts incrementally (rather than one big dump), continually confirming that there is alignment and understanding of what is changing and why, and soliciting feedback from 'the troops' on the front line who may spot genuine issues much earlier in the process (rather than disruptive discovery of those issues after go-live). Getting employees onboard, helping them understand what is being done and why, and getting them enthusiastic about what is happening is critical to the success of any ERP implementation (agile or otherwise).

[8] Manual systems and processes allow for and/or cause a lot incompleteness and error in the data. Because people are involved in these manual processes, they can compensate for the weaknesses of the data by filling in missing data from one step to the next, thereby allowing incomplete data to persist in the source files/databases. People entering or re-entering data also make mistakes and create duplicates, creating more issues that need to be cleaned up before a reliable automated system can be implemented. Often the ERP implementation is the first time this bad data is exposed and the implementation itself is incorrectly blamed for the bad data.

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Examples of Agile ERP Implementation

NetSuite's SuiteSuccess methodology is a good example of an Agile ERP implementation approach. Here we look at two examples of firms that have used SuiteSuccess to achieve quick time-to-value and ongoing improvements.

Wittek Golf

Wittek Golf Supply Company is a 70-year-old firm that is both a distributor and manufacturer of equipment and supplies for owners of driving ranges, golf courses, miniature golf courses, and golf shops. Their vision is to be a 'one stop source' for their customers. They carry about 8,500 SKUs. They manufacture and assemble a small number of those products, but those few products they manufacture account for about half of their revenue.



Wittek had outgrown their legacy financial system. Even though they are a relatively small business, they have many of the same complexities in their warehouse as a larger business, such as increasing amounts of drop ship requirements[9] from their customers, and the need to handle intense seasonal peaks. After evaluating several products, Wittek selected NetSuite, in large part due to its flexibility and the simplicity of configuration. Many of the adjustments they needed could be done by simple configuration changes, rather than having to write scripts.

They began implementation in August 2015. Wittek was one of the first customers to use NetSuite's SuiteSuccess program. That enabled them to use the preconfigured process flows for most parts of the system, identifying just a few areas where they needed to customize.

Data cleansing took some work. The company hadn't really had a digital catalog before that. And there were plenty of data issues that needed fixing. They used Excel to clean up their data and NetSuite's built in tools to import it (the project leader said "*NetSuite's native importer is awesome*"). They said that NetSuite's community of users were very helpful in providing formulas and tips to speed up the data cleansing process.

[9] Shipping directly to the end consumer who has placed an order with one of Wittek's customers.

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As a result of using the blueprint approach, Wittek was able to go live in less than 100 days. They were able to achieve value immediately upon go-live. The system has brought process disciplines and helped them reduce errors in many of their processes, such as pick, pack, ship, leading to higher customer satisfaction. Now they are implementing ecommerce, where they expect to realize even more value from the system soon.

Lindemann Chimney Service

Lindemann Chimney provides both residential chimney services (such as cleaning, inspection, repair, and restoration) as well as selling commercial chimney supplies[10] to other chimney service providers. They have four distribution centers for the commercial supply side of the business (Chicago, New York, Atlanta, and San Francisco). They also do some manufacturing in Atlanta. Amazon is a major channel for Lindemann—they are doing both Fulfillment-by-Amazon (FBA) and Fulfillment-by-Merchant (FBM). Lindemann carries about 7,000 SKUs, manufacturing about 20 of those themselves. They are expanding into B2C[11] supplies and so expect to add another 20,000 or so SKUs by the end of the year. Their new website, integrated with NetSuite, is a key enabler of that expansion.



Lindemann had previously been using Magento for ecommerce along with a separate system as their financial system of record. That setup was not designed for fulfillment from the warehouse and they had problems with the integration between the two systems. Furthermore, they had five different instances of their financial system, one for each division. As a result, they had four employees just cleaning up and rekeying ecommerce orders into their financial system.

They looked at over half a dozen different ERP providers, ultimately settling on NetSuite. They replaced Magento with NetSuite's SCA (Suite Commerce Advanced) at the same time replacing their financial system with NetSuite Advanced Financials.[12] Lindemann was also an early adopter of NetSuite's SuiteSuccess program. An important element for their smooth go-live experience was what happened *before* they selected NetSuite as the provider. Lindemann told us that NetSuite's salespeople took the time to ask the right questions, really understand Lindemann's business, and then came back with clarity about the recommended approach.

[10] Such as tools, liners, caps, dampers, fans, hearth products, masonry supplies, and so forth.
[11] Business-to-Consumer. Today Lindemann only does B2B (Business-to-business) in the supply part of their business.
[12] Lindemann doesn't have a WMS system today (their DCs are run manually with paper-based systems), but they are looking at moving up to NetSuite WMS Lite.

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The implementation of the ERP portion only took six weeks. The website took another two months, primarily due to internal resource constraints on preparing and loading the large amount of data. Lindemann's Director of Ecommerce, Dave Ullmann, said "*I've been through a lot of software implementations and have never seen one go this smoothly. We were taking orders and doing everything the moment we went live.*" He said this was possible because of NetSuite's agile approach—persistence during implementation, with continuous touch points, refining, testing, fixing, and iterating again until everything was working. Ullmann also praised the stability of the system, saying that fixing and tweaking things did *not* cause something else to break, as frequently happened in his experience with other ERP systems.

With their old ecommerce system, importing data was a daunting task, since it did not have an easy import/export tool. In contrast, Ullmann said, "*Importing data into NetSuite was ridiculously easy.*" But they still faced the challenge of cleaning up data from fifteen years of errors introduced by systems that required rekeying of data from one system to the other, did not enforce policies or validate data, and thereby created dirty data.[13] Their new NetSuite system enforces field restrictions (like only numbers allowed in a phone number field) and ensures well-formed data.[14] NetSuite's employee roles and restrictions are strong. Now with the built-in validation rules and the automated flowing of data between ecommerce and core financials, it has freed up the four employees who were previously doing rekeying and cleanup work. They can spend time on more value-add activities.[15]



For the service side of the business, Lindemann currently does estimates, booking, and scheduling of appointments using Salesforce.com. However, they are in the process of building out their own scheduling functionality using NetSuite. This is possible with the SuiteScript capabilities of NetSuite that make it possible to easily extend core functionality, while maintaining integration and forward compatibility.

The rapid implementation has quickly positioned Lindemann for their next phase of growth, keeping them ahead of the competition. They now have a native-integrated, easy to maintain/enhance financial and ecommerce foundation on which to continually differentiate and quickly implement new growth strategies, such as their new B2C supply business. They couldn't have done it nearly this quickly without the SuiteSuccess programs and the agile implementation approach that NetSuite brought.

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[13] For example, someone would enter something that is not a valid phone number into the phone number field, such as a note telling which line this was (like "Fax line" or "Support Line").
[14] For example, an email address field must have an @ and proper domain name.
[15] For example, those employees are adding lots of rich content to Lindemann's ecommerce site, to help Lindemann achieve their goal of becoming the 'Wikipedia of Chimney knowledge.'

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Conclusion—The Value of Agile

An agile, blueprint-driven approach to ERP implementations brings tremendous benefits:

- *Agility/Lower Risks*—Internal and external business conditions change so fast that long implementations risk being off-target and obsolete by the time they are ready. By breaking projects into smaller pieces, companies can adjust direction and priorities as changing circumstances dictate. Their business is not hamstrung by a dated, hard-to-upgrade, incorrigible ERP system.
- *Lower Costs/Better ROI*—Long implementations are inherently more expensive. They consume more hours of consulting and more hours of employees' time. Rapid implementations reduce the 'I' in the ROI. With big bang ERP implementations, it can be literally years before seeing a return on the investment. Long implementations also drain the time and energy of the company, creating 'implementation fatigue.' Rapid implementation helps sustain energy, enthusiasm, and momentum.
- *Value Achieved Sooner*—Rapid implementation, done right, brings rapid time-to-value. The company starts using, learning, absorbing, and then improving much sooner.
- *Continual Improvement*—Once the system is up, employees start finding more ways to use it to improve their business. With an agile approach, the benefits keep flowing, as improvements keep occurring at a regular frequent cadence.
- *Incremental Funding/Success*—Benefits, such as cost reductions or revenue gains, accrued from the early implementation can be used to justify and fund the next steps in incremental implementation.

What to Look for in a Solution Provider

Marketing language tends to blur the lines between providers and makes it harder to distinguish actual capabilities. Everyone claims to have rapid implementation methodologies. Some things to look for:

- Average *actual implementation times* say a lot about a solution provider and their approach.[16] Data from an independent source on this can be more reliable.
- Frequency and duration of business disruptions after implementation.
- Guidance given by the solution provider during the evaluation period—does the provider truly understand your business and industry? Are they acting as a strategic partner?
- Industry-specific blueprint approach—If the provider claims to have a preconfigured industry-specific blueprint, ask to see it and explore what effort will be required to make it work.
- Agile approach during the sales cycle—does the provider quickly turn around a demo of what the implemented solution will look like? Ask them what work will need to be done upon go-live to achieve what is shown in the demo.

Agile ERP's time has come. Businesses that want to be agile themselves should embrace it now.

[16] NetSuite's '*Zero to Cloud in 100 Days*' SuiteSuccess program is an example of what is possible when an agile ERP approach is used.

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ChainLink Research, Inc. is a Supply Chain research organization dedicated to helping executives improve business performance and competitiveness through an understanding of real-world implications, obstacles and results for supply-chain and IoT policies, practices, processes, and technologies.

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