DEFEATING ENTERPRISE IT FRAGMENTATION WITH A SINGLE-PLATFORM MODEL

Abstract

Global corporations jumped onto the digital transformation bandwagon at least two decades ago, when the likes of Oracle and SAP dominated the ERP and CRM market. For many enterprises, these core business systems were complemented by a range of local products such as HR platforms, asset management systems, workflow management tools, reporting dashboards, etc., that appealed to their local requirements. In this pursuit of localization, corporations slowly started building a large umbrella of complex, interconnected systems to keep the organization running.

Even today, most enterprises operate with legacy systems or a fragmented application landscape for their everyday business needs. While these families of complex, intertwined systems may have done a great job in the past, many are no longer a viable option for reasons that we will explain in this paper.

The million-dollar question is, how can these problems be addressed without complicating the system further or costing a fortune to solve. This paper proposes a simple solution - one, universal platform that embraces modern-day cloud solutions while offering provisions to develop localized features alongside seamless integration processes.

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Introduction

"Times and conditions change so rapidly that we must keep our aim constantly focused on the future."
-Walt Disney

The technological revolution that has taken the world by storm over the past few decades has had a significant impact on today's business landscape. The biggest beneficiaries of this wave of new technologies were large global corporations running multiple businesses across different geographies, and catering to heterogeneous markets with localized offerings.

These global firms spent millions of dollars on their IT infrastructure to keep themselves competitive and cost-efficient. Most corporations have a core legacy system that interfaces with many smaller applications to meet localization demands. This umbrella of business applications has worked effectively for enterprises in the past, but they are no longer able to cope with changing market demands due to their fragmented nature.

Additionally, these applications are spread across different geographies making for very complex integrated systems.

Adopting a single platform solution that offers the benefits of agility, cost-effectiveness, user-friendly interfaces, and a comprehensive roadmap toward the development of future digital features can address many of the above-mentioned challenges.

The Current Landscape

The IT landscape can be vastly different for every company and it is difficult to distribute enterprises into a binary classification. So, for the sake of clarity, let's consider 3 of the most common parameters for organizational categorization - revenue, employee strength, and home-grown IT team/infrastructure. And to paint a better picture of the current landscape we will be looking at businesses using 3 broad divisions.

Large Businesses- These are typically organizations with annual revenue of over 1 billion USD and more than 1000 employees spread across different geographies. Most of these businesses have their own IT team, alongside ageing infrastructure that their whole IT ecosystem is developed around. Many of these legacy systems (on-premise) have multiple and complex integrations with different applications spread across the globe. Our focus in today's paper would be to decode this fragmented ecosystem and find a way to address it.

Mid-Size Businesses- These businesses typically generate a revenue of 10 million – 1 billion USD with an overall strength of 500-1000 employees. Mid-sized businesses generally have a small group of IT staff. It can be expected that these organizations have a presence in more than one market, albeit on a somewhat smaller scale than global organizations. These enterprises don't generally have the baggage of a complex legacy ecosystem and it is likely that some of their systems, if not all, are already on cloud-based applications. They would be looking at solutions to further digitize their ecosystem on a SaaS-based platform that provides bundled offerings so that they can reduce their overall IT expenditure.

Small Businesses- Small businesses typically comprise enterprises with less than 10 million USD in revenue and limited geographical reach. Their IT spend would be minimal and they generally look for boutique products to cater to their limited business processes. It would probably take a while before these enterprises can scale up and reap the benefits of a single platform model.

What Do Analysts Predict?

According to Bloomberg, due to the current Covid-19 situation, total IT expenditure is set to contract by 8% in the next fiscal year. Similarly, in April, IDC reported that growth in global IT spend could decline by 2.7%.

And while Gartner Inc. forecasted a 3.7% increase in IT spend at the start of the year, the firm expects that figure to be much lower given the scale of the pandemic.

This means that organizations will be more likely to switch gears to survival mode and place IT expenditure under a microscope to ensure maximum value from every penny spent. During these uncertain situations, it is only natural for larger organizations to revamp their sprawling IT ecosystems, in favor of solutions that are future-proof, agile, and more cost-effective.

Legacy System and their Pain Points

From rising costs to fitting in with the new normal, enterprises around the world are encountering fresh problems with old technology ecosystems.

- **Capital Expenditure:** Legacy systems come with the baggage of heavy capital expenditure including infrastructure costs, team and talent maintenance, and expensive service maintenance costs. According to the Wallstreet Journal, the IT spending index dropped to 987 in April, down from 1005 in March 2020.

  The index is based on a global survey of enterprise IT buyers and a composite of the market and economic indicators - any score above 1000 indicates a positive

IT spend and a score below generally indicates a decline. Moving forward, the IDC states that there is a premium on agility, cloud, and associated services, which is encouraging companies to divert their limited funds to new-gen technologies like AI, ML, etc . This, in turn, points to a need for solutions to help these companies shift from traditional, home-grown, infra-based legacy models (which generally invite heavy CapEx) to a SaaS-based model, without compromising on productivity and future-proofing.

- **Dependency on multiple vendors:** Fragmented IT ecosystems often require a consortium of vendors to help maintain infrastructure and business applications. Hiring a third party for Application Management Services (AMS) is generally a viable option in terms of cost savings and skill requirement, but in a fragmented ecosystem, the costs tend to shoot up in the long run. Moreover, managing multiple vendors doesn't help organizations craft an agile digital transformation plan - a major pain point considering today's pace of business. Local vendors often only support local applications and that can lead to multiple points of contact for multiple applications. This results in longer issue resolution and a loss of the competitive advantage that these local players once provided.

- **Unclear product roadmap:** In a May 13th ,2020 forecast, Gartner claims that even though overall IT spend is declining, investment in cloud services is expected to grow 19% this year. In fact, companies are moving to the cloud to reap the benefits of lower costs, data protection, real-time analytics, and more. But that said, many product companies are ending their support for legacy applications, making it more difficult for organizations to craft a path toward a more future-proof IT solution.

- Operational Insights: In today's world, organizations are moving more and more towards data-driven applications involving AI, business intelligence,

and analytics to make their processes more efficient and cost-effective. Many legacy systems do not support these contemporary and emerging technologies and that can be a major cause of concern. Besides, even if a third-party app is integrated, the ecosystem becomes more complex and more difficult to upgrade/maintain.

- **Speed, Growth, and Compliance:** The turnaround time for any technology implementation is expected to be much shorter than it used to be - in many cases the TAT has come down to a matter of mere weeks. This has put many traditional business applications in a tight spot as their solutions are expected to be agile, scalable, and comply with the local laws and regulations. For example, if a financial institution must implement a modern banking solution for its retail divisions in the USA, there are multiple data laws that the solution needs to comply with. Similarly, in Europe, the General Data Protection Regulation (GDPR) is a mandatory requirement and organizations need to ensure that they are continually compliant with this legislation.
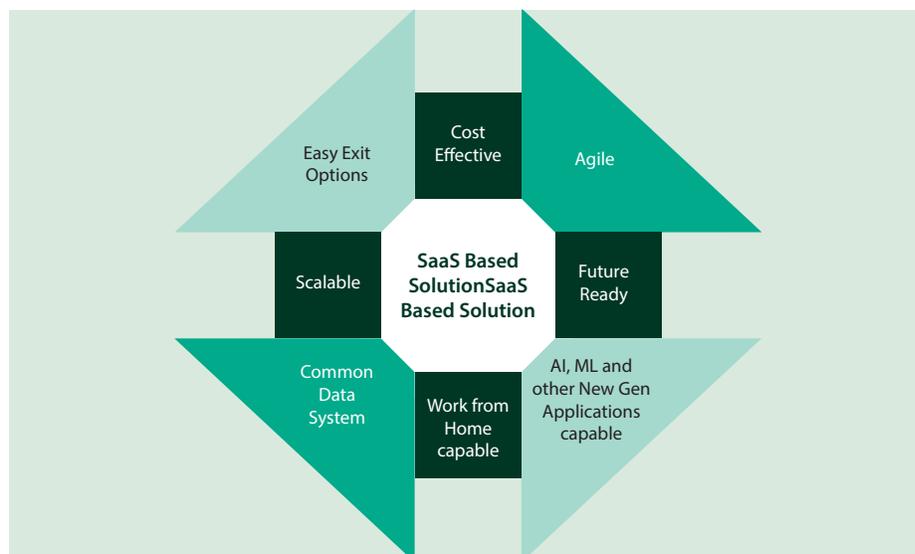
- **Remote Workspace Requirements:** During the current global crisis, organizations have been forced to adapt to remote workforce models. And to be honest, remote working is likely to be the new normal for a considerable amount of time. Organizations that were running legacy systems had a tougher time enabling employees to work from home without affecting productivity. The lack of available accelerators and tools hit these organizations hard, forcing a few of them to shut down operations. Experts at The Wallstreet Journal, state that IT executives need to reevaluate workforce IT tools to best accommodate the new work experience.

Above are some factors that are driving a major impact on the profitability of many organizations. To stay competitive, it is imperative that today's enterprises move to a new ecosystem - either to the cloud or hybrid apps. It can be a difficult journey to embark on but not an impossible one.

Why Move to a Single SaaS-based Platform?

It might occur to you that we've only covered negative angles about ageing IT ecosystems and fragmentation, without any mention of a viable solution. Well, to cut to the chase, one viable option involves migrating the entire landscape to a single SaaS-based platform.

Let's get into the details of why this works better for most large enterprises.

Easy Exit Options | Cost Effective | Agile | Scalable | **SaaS Based SolutionSaaS Based Solution** | Future Ready | Common Data System | Work from Home capable | AI, ML and other New Gen Applications capable

- **Cost-Effective:** Total cost of ownership is often a significant factor in every enterprise purchase. When a company is using a legacy system, they usually pay a recurring cost for the licenses, infrastructure, specialized teams and possibly a few support vendors to maintain the applications. But when a company moves to a SaaS-based platform, they can take advantage of the pay-as-you-go model. The need for a local team and extensive infrastructure to maintain the applications also becomes redundant.

  Furthermore, the number of vendors required to maintain different applications on various platforms can be greatly reduced (to 1 or 2 in most cases) and the entire capital expenditure can be minimized. Organizations using single-platform, SaaS-based business systems will also have fewer concerns about the quality of the set-up since the highly competitive business cloud landscape forces vendors to deliver high-quality services.

- **Agile:** Applications built on legacy platforms have a long incubation time before the implementation can begin. Generally the infrastructure can take around 1-3 weeks before it is ready. This lost time can be easily made redundant if the application is built on an SaaS platform, which enables and accelerates implementations, thus bringing down the overall implementation timeline and cost.

- **Future Ready:** Organizations can have a roadmap for future applications using a SaaS approach, without worrying about out-of-control costs. Upgrades on these platforms are easier than their on-premise counterparts and make future application implementations relatively effortless.

- **Compatibility with AI, ML, and emerging technology:** Earlier, we discussed how technologies like AI, ML and new-generation applications like chatbots and RPA, etc., are becoming an integral part of an organization's digital journey. A single platform makes it much simpler to implement these technologies since it can make better use of existing data to build the models required. Application upgrades are also seamless since the master data is on the same platform.

- **Remote Workforce Enablement:** During an era where working from home has become a norm, it's important that the hardware issued to employees is capable of running every application with minimal disruption. If the organization is on a legacy platform, the installation of multiple applications, drivers, etc., and calibration of the system becomes extremely difficult. All this can be avoided if the whole ecosystem is moved to the cloud and one a single platform.

- **Common Data System:** Data is integral to any business ecosystem. It is important that data is interoperable by every application and that organizations can get the most value out of their analytics tools. A common data system eliminates the need to have middleware for data interoperability, thus reducing the overall complexity of the system. A common data system is one of the core features of a single platform, SaaS-based enterprise solution.

- **Scalability:** As a contingency for unplanned growth, organizations acquire licenses and infrastructure that exceed their existing requirements. This involves unnecessary cost additions. Not only does this preparation extend to one or two core applications, but often covers all the applications scattered across their ecosystem.

  However, a single, SaaS-based platform is run on the basis of a subscription model. If an organization has to scale up, they just need to buy more units or licenses and scalability is delivered on demand by the product vendor at the back end. A need for downscaling can be addressed in the same way.

- Easy Exit Options: In a legacy ecosystem, organizations are usually stuck with their current system because of the heavy capital expenditure incurred.

Even if the implemented solution does not provide the benefits that were promised, organizations often find that the short-term benefits of changing or migrating to a new solution don't seem to outweigh the costs. The whole point of having an IT system is to reduce the overall cost in the long run, and an IT landscape that drains resources doesn't serve much purpose. These issues are often non-existent in SaaS applications since they offer the flexibility for any organization to easily exit the ecosystem and move to another cloud platform.

Dynamics 365 is the way forward

Microsoft Dynamics 365 is a combination of Intelligent CRM and ERP solutions coupled with technologies like chatbots, AI ML, Reporting, (Analytics), and much more. Microsoft Dynamics 365 can be considered the go-to solution to migrate the entire enterprise ecosystem to a digital platform.

The software suite provides all the benefits mentioned in the previous section and comes with additional features that make it the preferred choice for modern enterprises.

- Flexible Pricing: Dynamics 365 offers simple, transparent pricing, making it easier for organizations to keep a tab on their monthly billing. For example, If a business unit has 15 users from the sales team who need CRM licenses and only 5 users from the finance team who need access to a finance module or application, then the organization can choose to pay only for the 15 CRM licenses and 5 finance module licenses without any hidden costs. This flexibility allows organizations to change the license structure frequently, as business requirements evolve.

- Common Data Model: The Common Data Model of Dynamics 365 simplifies data management and application development by unifying data and applying structural and semantic consistency across multiple apps and deployments which can be reused

& extended in standard entities. The data can be easily reused for future applications without spending extra on any master data management effort. This also helps to manage all the entities and relationships through connected apps.

- Power Platform: We all can agree that every business process cannot be digitized using one application. That's why Dynamics 365 gives businesses a tool like Power App - a low-code development platform with seamless data integration. These features reduce the user's dependability on customizations which can complexify the IT landscape.

- Mobile-Enabled: Dynamics 365 is mobile-enabled, and embraces enterprise mobility solutions. Apps can be easily built utilizing the Power platform and productivity can be boosted, via simpler, more intuitive UI.

- Regular Updates: Microsoft spends a significant amount of resources on upgrading its products and offers biannual major updates with minor updates spread around the year. Once the organization signs up with Dynamics 365, they automatically receive updates on the schedule. This ensures that organizations are always using the latest version and saving a significant amount of resources from not having to upgrade their applications every 3-5 years.

- Data Privacy and Compliance: With a growing number of data centers spread around the world, Microsoft adheres to data privacy laws (like GDPR in Europe) by keeping the data within the country. Data security is of paramount importance and since it's not within the premises of the organizations, Microsoft ensures that industry-leading data security parameters are always in place.

- Unified Interface: Dynamics 365 follows a unified interface model where all the integrations between CRM, ERP, and other applications within Dynamics 365 are integrated seamlessly. This makes it much easier for the end-user to switch

between different applications from a single point.

- Deeper Integrations with Office 365: Dynamics 365 comes with out-of-the-box Office 365 integration - another key differentiator, as many applications need additional customizations to make this integration work. When using legacy systems, any issues with the customizations made for these integrations will usually not be supported by the product vendor. However, these issues can be negated with Dynamics 365, as Microsoft itself will investigate such bugs and resolve user issues.

- Analytics: Power BI is a powerful tool and a market leader in business analytics. As part of the product stack of Dynamics 365, the integration between Power BI and other applications is simplified with inbuilt connectors which not only links other Dynamics 365 applications but also applications from different platforms like SAP, Salesforce, etc. Leveraging the Common Data Model, reports, and dashboards created within Power BI can be published to other applications, reducing the effort and time spent on switching applications by the end-user.

To better understand how Microsoft Dynamics 365 can help an enterprise achieve more, let's take a look at a real-world example.

A leading car parking solutions provider based out of Europe has an exhaustive list of complex systems, which were implemented over the past decade. The primary objective of these systems was to provide a robust IT infrastructure that could manage the company's CRM and ERP needs. Apart from a core on-premise ERP and CRM solution, a few smaller applications were being used to cater to the localization and core parking demands. These complex systems are linked to each other through a series of interfaces and integrations that eventually started affecting the performance of the whole ecosystem. Due to this system, the company often deals with:

- Poor ROI
- Endless manual work
- Frequent downtime
- Inability to prepare important reports
- Lack of scope for implementation of AI/ML
- And the list goes on

The current IT landscape of the company can be assumed to be as per the following figure.
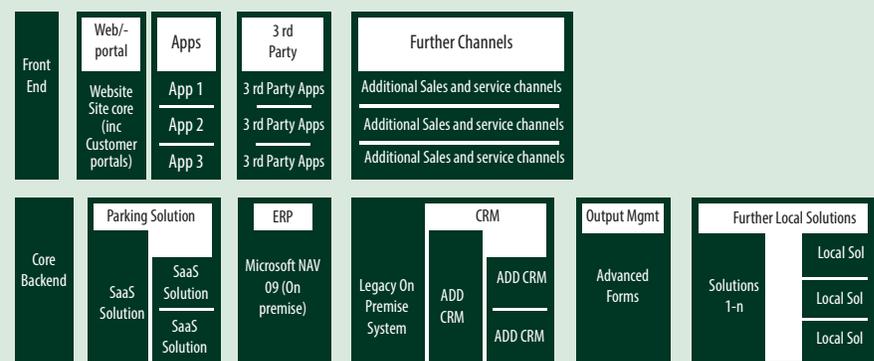

As per the above architecture, many integrations are in place along with an army of local custom applications to keep the IT landscape afloat. This setup might have been a viable solution a decade ago, due to a shortage of core CRM and ERP solutions that catered to the local

needs for any organization but in today's time, this setup is outdated and highly inefficient. Bringing the core system under one umbrella of offerings is the smart way to move forward, as this approach gives companies several options to plan their IT transformation journey.

Why choose Microsoft Business Applications

As we can see, the whole ecosystem is scattered across different custom applications, which are outdated, and a series of integrations being one of the pain points. All these systems can be brought under the ecosystem of Microsoft taking the Cloud solutions of CRM (Dynamics 365 CE) and ERP (Dynamics 365 FO) as the core system and the local applications that cannot be wrapped under the above core applications can be made using Power Apps. An illustrative architecture for replacing the above legacy architecture could be the following figure.

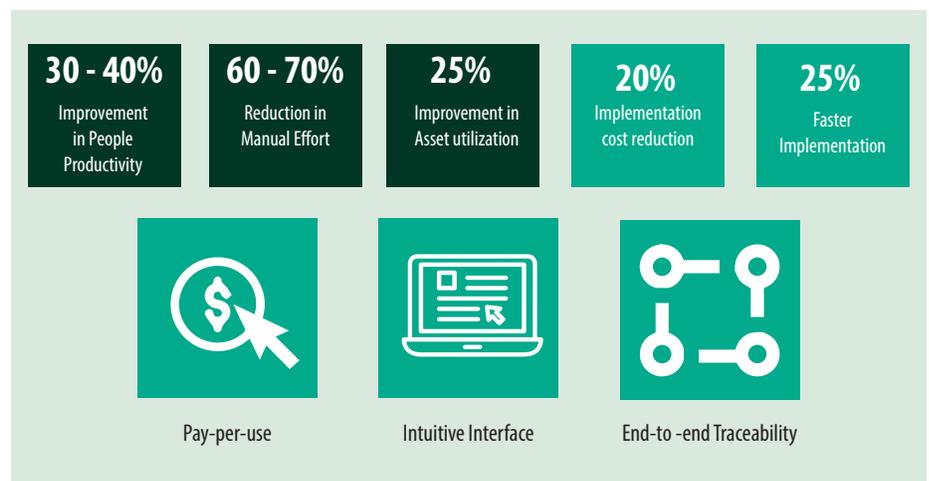## Our Proposed Solution Architecture for seamless migration and integration
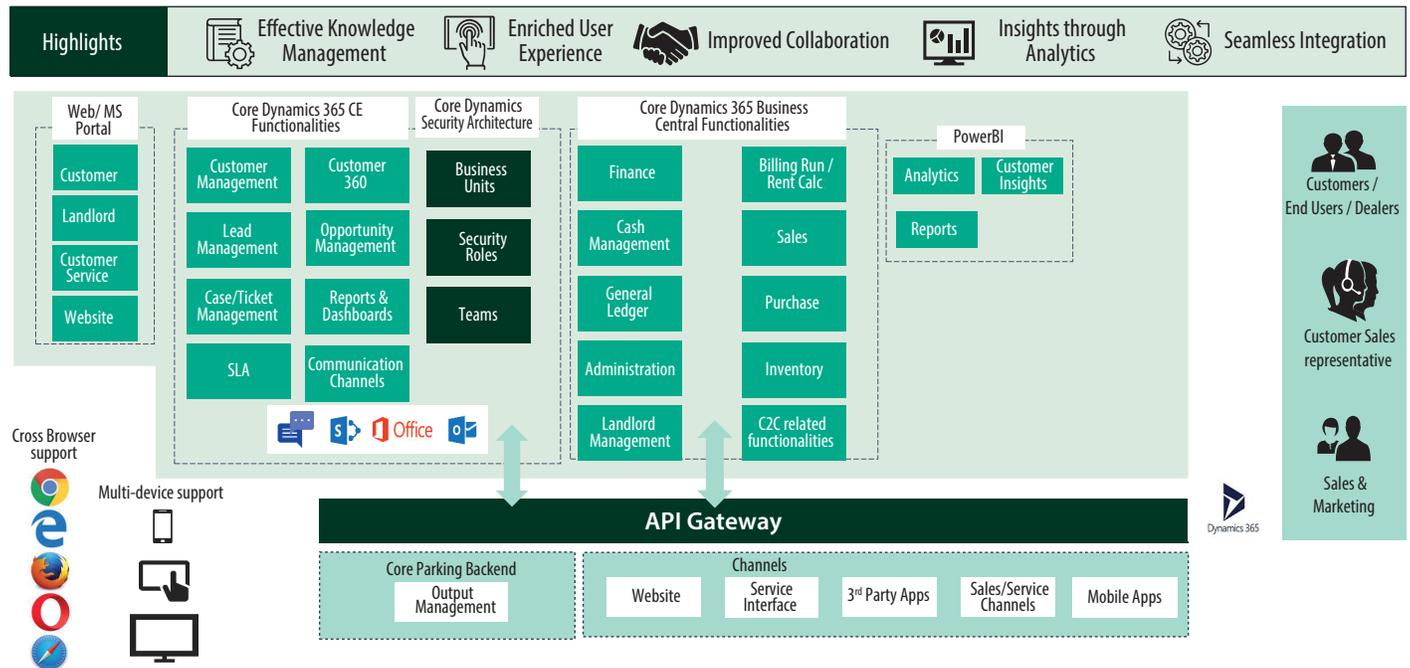
The above architecture depicts a perfect unification of all the core applications under Microsoft and leaving room for many more additions within this ecosystem without breaking a sweat or burning a hole in the enterprise pocket.

The reporting system improves leaps and bounds with Power BI making better and efficient use of the data being stored. The customer service applications can leverage the likes of Chatbots and AI/ML to reduce the manual effort for repetitive cases. The cloud infrastructure can be maintained on Azure, which is one of the leading cloud solutions in the market. Since the whole ecosystem is hosted on the cloud, Microsoft manages server maintenance applications, upgrades, etc.

The above-mentioned pros are just the tip of the iceberg when it comes to overall business benefits. In the case of the car parking solutions provider we mentioned earlier, the proposed solution is expected to bring in the following benefits:

The proposed solution is expected to bring in the following benefits to the customer.

30 - 40%	60 - 70%	25%	20%	25%
Improvement in People Productivity	Reduction in Manual Effort	Improvement in Asset utilization	Implementation cost reduction	Faster Implementation

Pay-per-use   Intuitive Interface   End-to -end Traceability

Why Choose Infosys?

So far, we have been discussing a single platform solution from a product perspective, but an enterprise product is only as good as it's implementation.

With decades of experience in various domains, Infosys has accumulated an extensive knowledge base and makes a strong case for being the ideal Microsoft Business Applications SI. Our wide range of expertise and our consultative approach to digital transformation is designed to accelerate every customer's digital journey - we're more than just a vendor, we're a strategic partner.

In fact, Microsoft awarded the Datacenter Migration Partner of the Year Award to Infosys, 2020. Infosys is also a member of the coveted Inner Circle for Microsoft Business Applications. A few other reasons why leading enterprises choose to work with Infosys include,

Strategic Partnership: Infosys has a strategic partnership with Microsoft and is able to offer more value to every customer in terms of product support.

Platform of Possibilities: As the name suggests, the Infosys Platform of Possibilities gives the customer endless possibilities by leveraging a wide suite of Dynamics 365 products with AI at its core.

Consultative Approach: Infosys advisory services help customers with package evaluation, product value realization, and OCM.

Expertise: Over 2 decades, Infosys has managed, implemented, and supported various engagements across industries of varying complexities.

REF-OR-M Solutions: The Infosys Reference Organization Framework is a packaged solution covering various Lines of Businesses, and accelerates the implementation of Dynamics 365. These solutions are tailor-made to cover the various problems across industries and customized on the basis of individual customer needs

Impact Showcase

Formed from a divestiture, and carrying significant IT baggage, a leading pressure pumping services provider in North America wanted to rapidly migrate from their legacy systems to a new digital platform. The key ask from the customer was for an agile, scalable, compliant, and economical solution with the added advantage of operational insights.

Infosys implemented an integrated technology solution covering Infrastructure, Business Applications, and Support built over the Infosys Platform of Possibilities that leverages Microsoft Dynamics 365, Dynamics OFS industry solution, and the Microsoft Azure Platform. This preconfigured industry vertical solution helped accelerate the implementation timeframe, while the entire offering is serviced in an IT-as-a-Service model that allows flexibility for BI Services to scale up and down depending on market cycles.

Implementation Highlights:

* Converged 39+ legacy applications to Dynamics OFS.
* Harmonized business processes across every business unit.

* Developed 50+ integrations including 28 integrations between the DynamicsOFS solution and Microsoft Dynamics 365 Finance & Operation 12, with banking channels, 10+ within other systems, i.e., ADP and b2b applications.
* Migrated data for over 32,000 products, 20,000 pieces of equipment, 10,000 vendors, and 1,500 customers.
* Seamless data integration with a leading Data Intelligence service provider.

Business Value Delivered:

* The accelerated implementation made significant savings for the customer.
* Inbuilt economies of scale reduced cost per user by 8%
* Using a single SaaS-based platform coupled with Infosys accelerated solution reduced the CapEx spend of the customer by 40%.
* Post-implementation, the operational costs were reduced due to better visibility of project life cycles in Dynamics OFS.
* Dynamics OFS offline capabilities, for the job execution module, enabled operational equipment utilization and employee productivity in the field to be improved by 10-15%, adding multimillion revenue to the customer.

Conclusion

In conclusion, ageing and fragmented ecosystems are a cause of concern, especially in today's world where cutthroat competition exists in nearly every industry. Given that overall IT spend is expected to come down significantly, organizations must rethink their digital strategy to make sure that their IT landscape provides maximum returns both in the short and long run.

The organizations that had already modernized their IT ecosystem showed more resilience and are coping better with the challenges in the current scenario.

Banking and financial services are expected to be the first among all the industries to take up massive digital transformation to consolidate and upgrade their IT ecosystem. In fact, many banks in the APAC region are taking up these programs to make their ecosystem more customer-centric and to deploy more intelligent applications.

The flaws in legacy and fragmented systems have been clearly exposed during the current pandemic, especially in the manufacturing and supply chain sectors. It is expected that these industries will follow the financial sector and undergo a digital transformation as soon as feasible.

Microsoft has already built an ecosystem to address the issues mentioned in this paper. A single platform built on the cloud with a unified interface and Common Data Model is the core value proposition for Microsoft Dynamics 365. Dynamics doesn't just take care of current enterprise needs but also paves the path toward future digital upgrades.

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Sankar Sighakolli has total 15+ Years of experience in the Microsoft Dynamics Business Apps, have worked on multiple Navision/BC/FO implementations across different version from on premise to Cloud. Additional experiences on the implementation and add-ons for the different industries viz Telecom, Apparel, Oil sectors. Actively works in new deals and pre-sales discussions

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