THE IMPORTANCE OF CHOOSING
THE RIGHT ERP SYSTEM

HOW DIGITALISATION AND INCREASED PRESSURE FOR CHANGE
AFFECT THE COST AND VALUE OF VARIOUS ERP SYSTEMS

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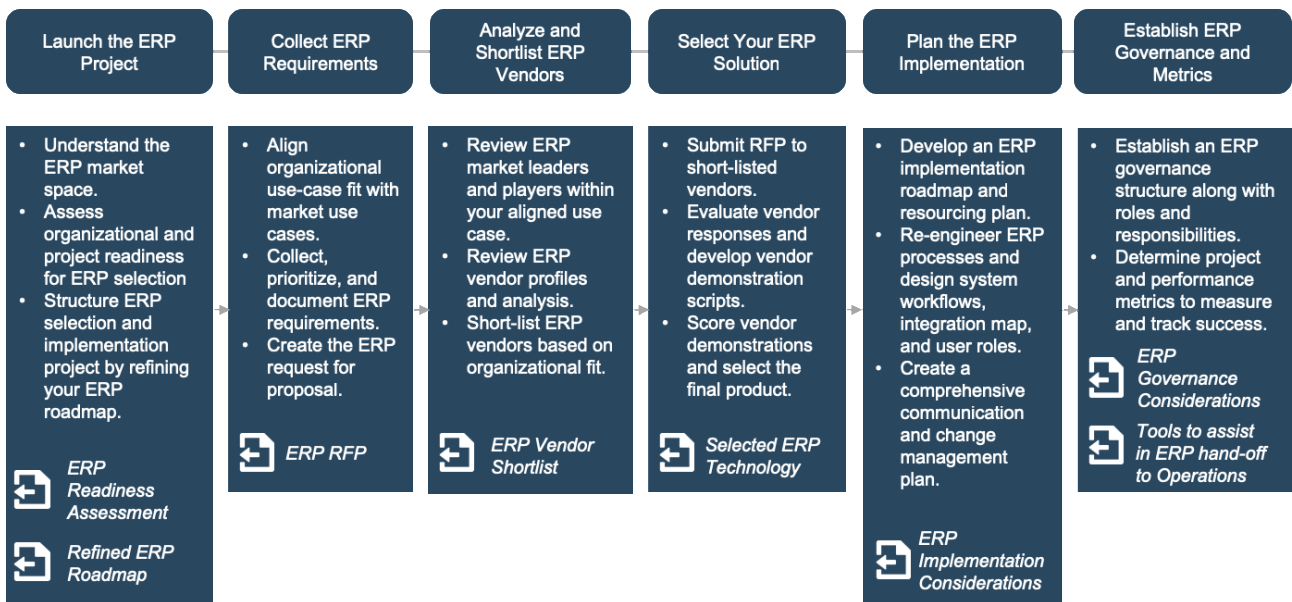SPECIALISTS

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1. THE IMPORTANCE OF CHOOSING THE RIGHT ERP SYSTEM

IT departments have long been under pressure to reduce the cost of producing and delivering IT support. At the same time, pressure has increased to make a more distinct contribution to the business and to act as an agent of change. So far, the answer has been to utilise the ongoing industrialisation of IT to a greater extent in order to reduce costs. As large areas of standardised IT production are transferred to mass production, costs are pressed for IT, something that usually affects infrastructure and operations. In parallel with this development, opportunities have arisen to digitalise entire organisations and create operational processes, business and delivery models and new revenue streams, all while increasingly lowering barriers to entry.

New technologies – or new applications for technologies such as artificial intelligence, blockchains, Internet of Things, cognitive platforms, etc. – create the preconditions for achieving disruptive changes in all industries, and in society as a whole. The ERP system is the hub of any business and, as digitalisation and new technologies change or replace business processes, models and offers, the right ERP system will become a prerequisite for benefiting from all of these new opportunities and for surviving in a rapidly changing world.

A typical process for selecting, evaluating and implementing an ERP system:[1]

Launch the ERP Project	Collect ERP Requirements	Analyze and Shortlist ERP Vendors	Select Your ERP Solution	Plan the ERP Implementation	Establish ERP Governance and Metrics
• Understand the ERP market space. • Assess organizational and project readiness for ERP selection • Structure ERP selection and implementation project by refining your ERP roadmap. *ERP Readiness Assessment* *Refined ERP Roadmap*	• Align organizational use-case fit with market use cases. • Collect, prioritize, and document ERP requirements. • Create the ERP request for proposal. *ERP RFP*	• Review ERP market leaders and players within your aligned use case. • Review ERP vendor profiles and analysis. • Short-list ERP vendors based on organizational fit. *ERP Vendor Shortlist*	• Submit RFP to short-listed vendors. • Evaluate vendor responses and develop vendor demonstration scripts. • Score vendor demonstrations and select the final product. *Selected ERP Technology*	• Develop an ERP implementation roadmap and resourcing plan. • Re-engineer ERP processes and design system workflows, integration map, and user roles. • Create a comprehensive communication and change management plan. *ERP Implementation Considerations*	• Establish an ERP governance structure along with roles and responsibilities. • Determine project and performance metrics to measure and track success. *ERP Governance Considerations* *Tools to assist in ERP hand-off to Operations*

During Step 4 above, a great deal of emphasis is placed on evaluating the supplier's responses based on the request for proposal (RFP) in Step 2, which in turn is generally entirely focused on functional requirements and investment assessments. The selection criteria that are most heavily weighted are therefore investment, adaption and investment costs. One common mistake made during this step is to omit process requirements and costs for maintaining high levels of functionality throughout the ERP system's lifecycle, something that, according to Radar's analysis, is the crucial cost base to be addressed.

Radar's analysis demonstrates that the operational, administrative and upgrade costs of an ERP system vary greatly both from supplier to supplier and, even more importantly, as a result of demands for increasingly rapid changes to the organisation's processes. Varying levels of complexity in ERP-system architecture and structure impact on upgrade and adaption costs to wildly differing degrees from supplier to supplier.

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[1] Radar Best Practice "Select and implement an ERP system"

This report focuses on experienced cost of ownership (not to be confused with Total Cost of Ownership as defined in Section 4.1) for various ERP systems based on data and KPIs collected from over 1,500 Nordic companies over several years. Current KPIs have been prepared prior to 2019.
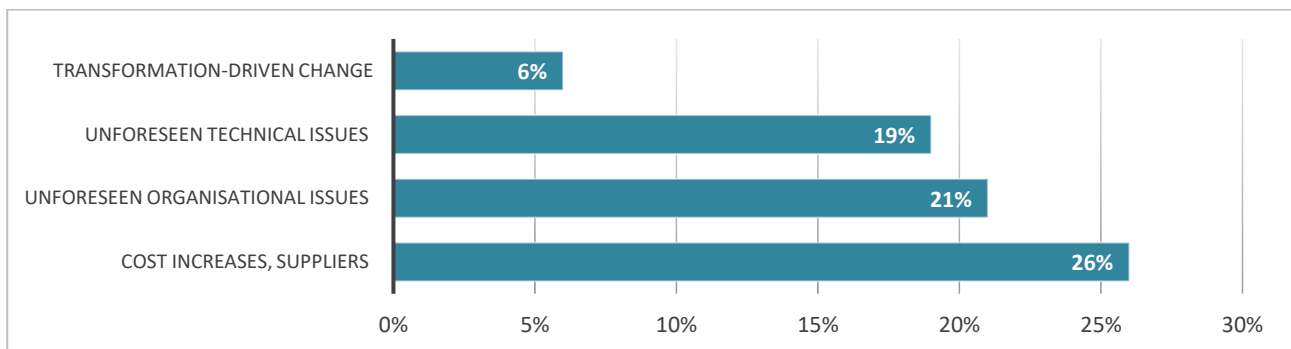
2. KEY PERFORMANCE INDICATORS (KPIS)

Choosing and implementing a new enterprise resource planning (ERP) system is among the most expensive and time-consuming technical transitions an organisation can embark on.

A number of trends have had a major impact on today's ERP systems and the functionality they offer. Compliance with existing processes and applicable legislation and regulation is an area of increasing importance and impact. Another interesting area is the application of AI and machine learning to processes running through ERP systems. A third and perennial trend is the difficulty involved in implementing an ERP system. On average, a project encompassing the procurement, adaption and implementation of an ERP system will consume 250% of the time set aside in the original project plan. One common mistake is to carry out a thorough analysis of the platform but to misjudge the capacity of the partner chosen for adaption and implementation. It is even more common, however, to undervalue the capacity of your own organisation. Internal competences, maturity and acceptance are vital parameters in any large-scale IT project, not least when driving change.
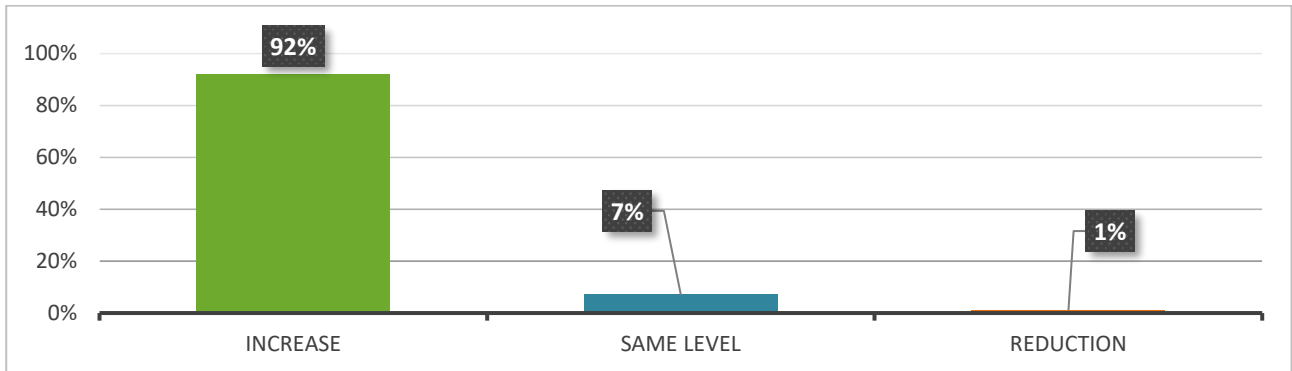

2.5 x Time

Your ERP system is the individual application that places the single greatest burden on your IT budget. If you look solely at the ERP system itself (ignoring the integration platform and separate business support solutions), on average this will account for 12% of the resources in your IT budget. Factors that lead to costs over and above your planned budget for the ERP system are:

Demands driven by change needs have the single largest impact on costs related to the ERP system.

At the same time, IT decision-makers are experiencing an increase in the tempo of the organisation's change requirements.

An ERP system's ability to support change and IT-driven innovation is a balancing act between how simple it will be to expand through existing key processes, and creating innovation by building new processes. At present, not all IT decision-makers feel that their current ERP systems support them in successfully driving innovation and change. As many as 53% of all organisations do not believe that innovation is supported, while 20% believe that key processes are not well supported by their current system.

53% experience a low level of support for innovation in their ERP system

Radar's analysis demonstrates that the average age of operational ERP systems is continuing to rise, with an average age for installed bases of just over 10 years. In 2014, this figure was 9 years. The number of major upgrades installed over the system's lifecycle has also increased, suggesting that the pace of change in our businesses has increased. The average number of major upgrades over the system's lifecycle is now 2.1, while the corresponding figure for 2014 was 1.7.

Despite this, there has been a demonstrated increase in customer satisfaction with existing ERP systems over recent years. Currently, 71% of all organisations are satisfied, an increase of seven percentage points from previous years.

Increased customer satisfaction (from 64 to 71%)

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3. FOCUS ON PROCESSES

In mature markets such as the Nordics, IT is to an increasing extent the bearer of commercial and social processes. When the increase of streams and volumes outstrips budgets, the focus falls on costs. There is pressure to reduce costs while, at the same time, IT must increase the support it offers and is often called upon to recreate processes. This is when the spotlight falls on the ERP system.

Successful organisations have come to understand that it is crucial to focus on end-to-end processes, rather than simply front-end, if they are to succeed in an increasingly real-time event-driven and stream-oriented reality. Value is created through process agility not simply at the front-end of processes that meet the market, customers or other stakeholders. An end-to-end focus addresses the entire process, something that is central to the ability to automate and digitalise. It also addresses streams in each process, which is crucial in going from a product to a service focus and finally being able to drive innovation and develop competitiveness.

3.1. FOCUS ON END-TO-END PROCESSES

Understanding your ERP system is all about understanding which horizontal processes (much like processes in any industry), which industry-unique processes and, finally, which unique competitive processes you have at your disposal.

The digitalisation of processes provides a crucial opportunity to drive innovation. In order to benefit from these proven values, organisations need to focus on IT-driven business development; not only front-end processes but end-to-end processes. Radar's studies demonstrate that operationally financed IT grows at almost three times the rate of traditional IT budgets. This proves that the initiative for IT-driven innovation is increasingly coming from the business. This is also a clear indication that innovation aided by information technology is becoming increasingly important to us as the pace of change in our business environment accelerates. Data shows that in 1965 the average length of time a company was able to remain on the list of the 500 largest companies in the United States was 33 years. By 1990, this had decreased to 22 years. It is calculated that this figure will drop to 14 years by 2026. Studying the list of the world's highest valued companies, it also becomes apparent that IT-intensive companies are the winners, with the eight largest IT companies among the highest valued companies globally.
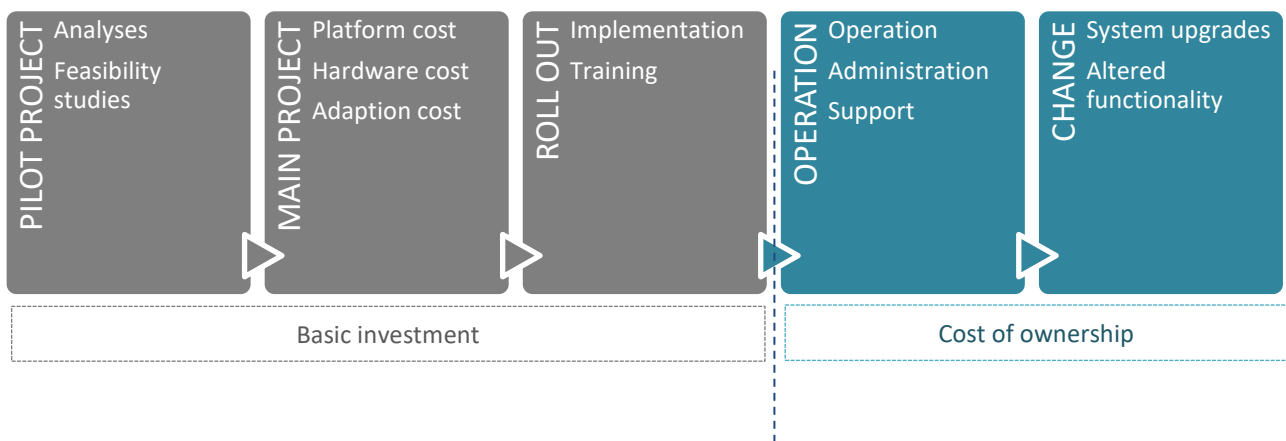
The overall trend is to utilise IT in order to grow the business; for example, digitalising processes to both streamline them and create possibilities for entirely new processes. Irrespective of whether the emphasis is on automating or transforming a process, there is a clear connection to the ERP system and the stream. An ERP system that lacks sufficient flexibility or that makes adaption and further development unnecessarily complex will hinder the use of IT as a tool for growth. Similarly, an ERP system that lacks sufficient flexibility and adaptability will be more expensive to own as the need for upgrades and changes will increase, which in turn will deplete an IT budget that could otherwise have been used to create added value for the business.

4. ERP COST-OF-OWNERSHIP

Operational, administrative and maintenance costs for an ERP system across its lifecycle are affected by business and operating models and, above all, by costs arising from upgrades or changes to the system. As the pace of change accelerates in all industries, so the need for upgrades and adaptions increases. Generally speaking, it has been demonstrated that the more adaption/development a commissioned ERP system undergoes, the greater the cost of managing an upgrade will be.

4.1. DEFINITION OF COST-OF-OWNERSHIP

Cost-of-ownership can most easily be defined graphically, as shown below. The two darker fields show the factors that make up cost-of-ownership and that have the greatest impact on total cost development related to the ERP system.

PILOT PROJECT	MAIN PROJECT	ROLL OUT	OPERATION	CHANGE
Analyses Feasibility studies	Platform cost Hardware cost Adaption cost	Implementation Training	Operation Administration Support	System upgrades Altered functionality
Basic investment			Cost of ownership	

It is therefore a matter of analysing post-implementation costs; in other words, the costs that are of most interest are often intangible costs for operation, administration and upgrades, as well as necessary changes related to these.
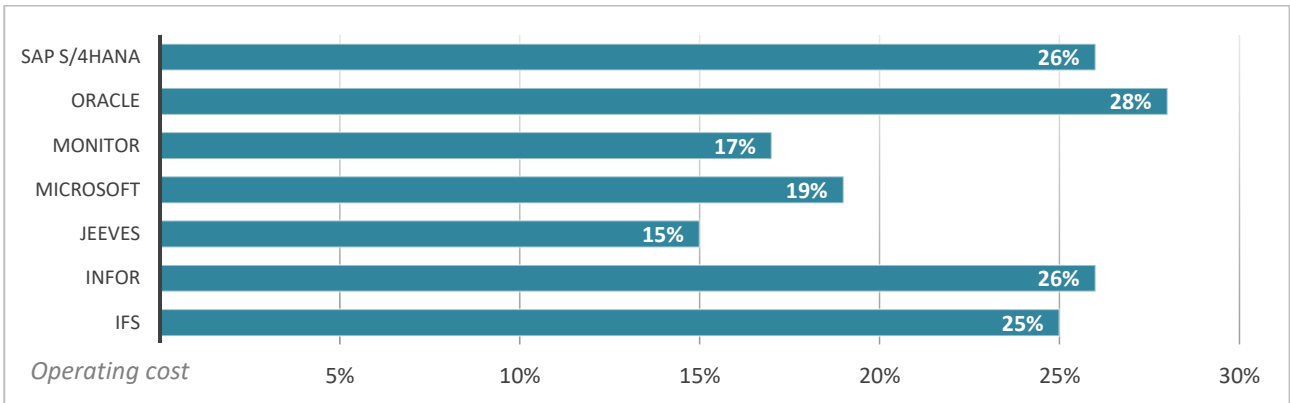
4.2. ERP COST-OF-OWNERSHIP

Radar performs various forms of benchmarking and cost comparisons in Nordic IT organisations on an ongoing basis. We have studied and analysed cost consequences related to ERP systems, with an emphasis on the lifecycle phase rather than the project phase as it is here that the largest costs accrue.
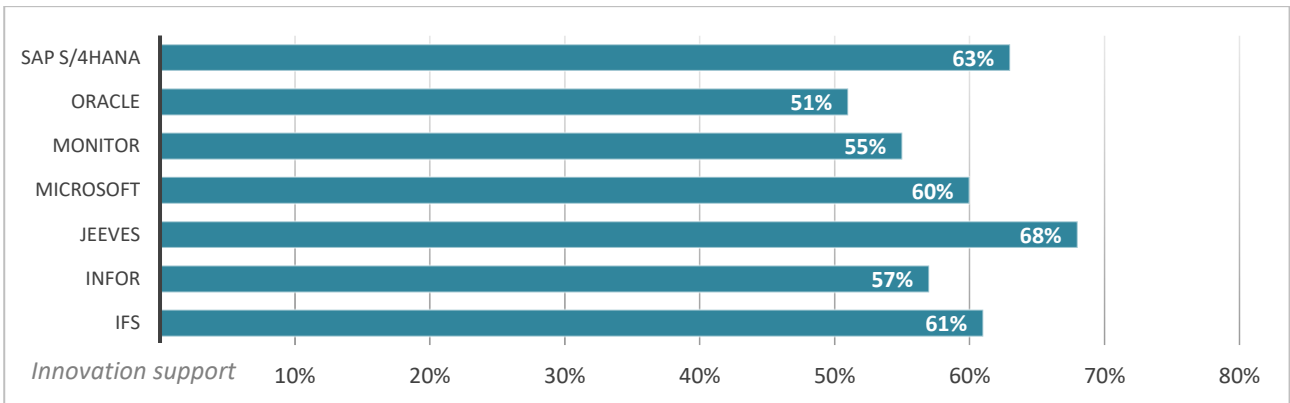
We have chosen to share the results for the ERP systems with the largest market share in Sweden and the Nordics. The emphasis has been placed on ERP systems with completed customisation and in companies with in the region of 200 or more employees. These ERP systems are:

- SAP S/4Hana
- Oracle
- IFS
- Infor
- Microsoft Dynamics Business Central (previously Microsoft Dynamics NAV)
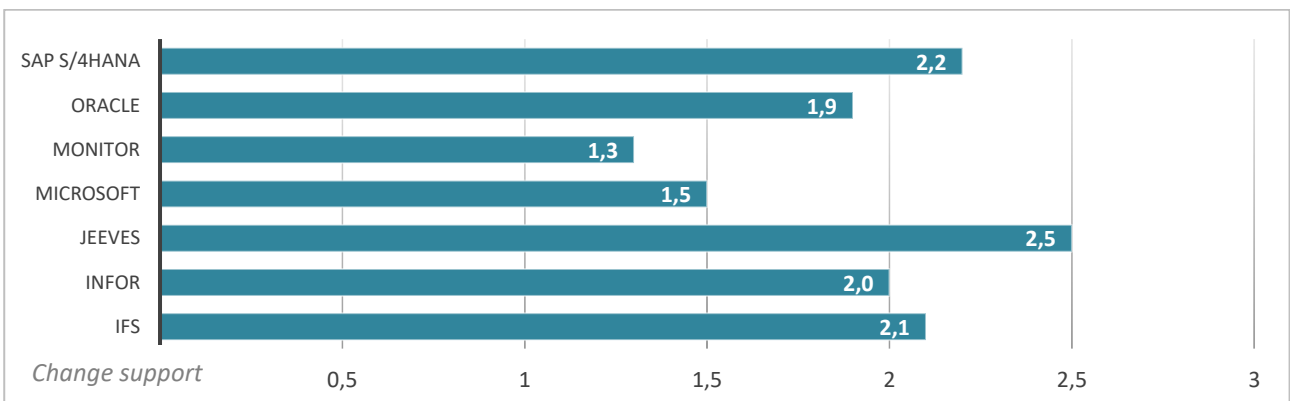- Jeeves
- Monitor

Shown below is the average annual operating cost (operation, administration and support) as a percentage of the original investment (pilot project, main project and roll out).

By examining how well an IT decision-maker feels that their existing ERP system supports innovation and change, we can gain an idea of how systems differ in complexity and flexibility.
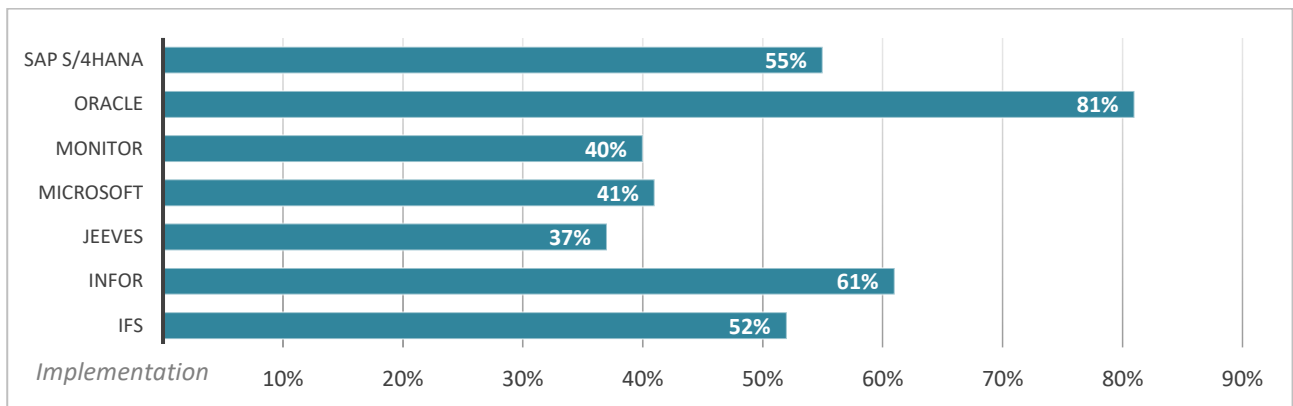

Jeeves users are those who most believe that their system supports change, followed by SAP and then IFS users. This can then be viewed against the background of how many major upgrades the ERP system has undergone.
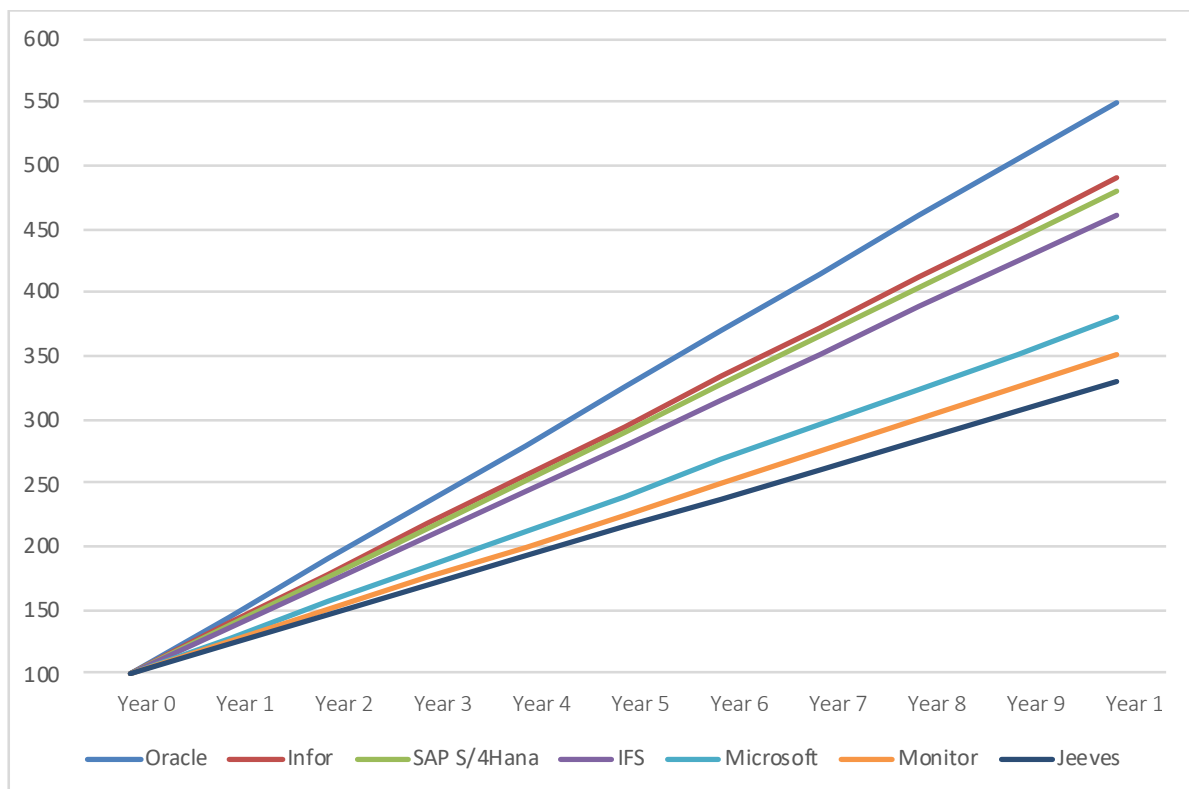

Jeeves users have implemented the most upgrades followed by SAP and then IFS users. Radar deems the ability to deal with multiple upgrades as strategically important in an age of rapid change.

Costs associated with major changes taken as a percentage of the basic investment vary a great deal from system to system.

Companies that use Oracle have experienced the highest costs per implemented upgrade, followed by Infor and SAP users.

In this new technological era, it is increasingly important to be able to drive change and innovation and keep up with the pace of change in the business environment. By applying the average number of upgrades across all systems, as well as each system's unique operating and upgrade costs, we can see a development curve for cost-of-ownership as a percentage of the original investment for the various ERP systems, as shown below:

The steepness of the cost development curve over the system's lifecycle varies for analysed ERP systems. Oracle has the largest cost development, while Jeeves has the lowest cost development given the average number of major upgrades across the system's lifecycle. Another important difference that we have not included in the analysis is the relatively large variation in basic investment between traditionally procured and administered systems, meaning that the total cost may differ to an even greater extent.

4.3. CONCLUSIONS

ERP systems are crucial when a dual focus on costs and increased IT-driven innovation is required. ERP is simultaneously the single application that ties up the largest cost base within an IT budget and the platform that regulates processes faced with increased automation, digitisation and innovation.

In order to successfully meet IT challenges, you must have an increased focus on processes from an end-to-end perspective within your organisation and, at the same time, an understanding of the streams of relationships, transactions and data running through it. This combination of increased focus om processes and streams together with a flexible and adaptable ERP system may be crucial in driving both IT costs and the creation of value through IT in the right direction.

Radar's analysis of the cost-of-ownership for various ERP-systems for 2019 concludes that:

- Oracle is the ERP system with the steepest cost development curve over 10 years based on the conditions applied, which is a change from the 2014 analysis when SAP exhibited the steepest curve based on the then prevailing conditions;

- Jeeves is the ERP system with the flattest cost development curve over 10 years based on the conditions applied, meaning that Jeeves has maintained its position since the 2014 analysis.

How the ability to keep up with the pace of change affects an organisation will vary depending on its choice of ERP system. How well key processes and industry-unique processes are supported varies from system to system, something that also affects the need for change. Analysis based solely on operating costs and costs for major upgrades suggests that, depending on the choice of ERP system, the organisation may face costs of between 330 and 550% of the basic investment over a 10-year period.

In all likelihood, the choice of ERP system will prove crucial to the organisation's ability to survive and thrive in a world in which the pace of change is continuously increasing. Cost-of-ownership must be included in the evaluation criteria for choosing and procuring an ERP system, given that an ill-founded decision may otherwise negatively impact on an organisation's operational capacity and ability to compete.

ABOUT RADAR

Radar's business is built on data, key performance indicators and analyses of each Nordic market as a basis for fact-based advice on IT management, business strategy and business development. The emphasis is on creating value and, thanks to loyal and satisfied customers, the business has grown to become the independent consultant with the largest customer base in the local market.

Radar's services create opportunities for you as an IT decision-maker to manage your business based on locally collected facts on how Swedish and Nordic IT managers plan, deliver and implement their IT operations. Through close proximity and knowledge of the local market and using thousands of data points in the IT ecosystem, Radar delivers value creation that leads the way at both an operative and strategic level. Radar delivers products and services to both suppliers and buyers of IT systems and services, something that creates a unique vantage point from which to follow developments in the IT ecosystem. Radar is therefore in a position to offer a unique level of detail that, through our various offers, reinforces the customer's capacity, profitability and efficiency based on local conditions.

A leading supplier of fact-based insight
Radar delivers insight based on local data, insight built up through thousands of strategy, prioritisation and KPI comparisons that IT decision-makers and suppliers commission Radar to perform and analyse each year in their respective markets. By analysing these data points, and through close proximity and knowledge of the local market, Radar delivers value creation that leads the way at both an operative and strategic level. Radar monitors a great many underlying regulatory, market and technological trends that may alter the conditions in which an IT business operates, and works to provide advice on and insights into those changes that are inevitable.

KPI database
Since its inception, Radar has built up intellectual property in the form of databases and models for various types of benchmarks for IT operations, price and cost comparisons and quality parameters. These databases have been developed through customer commitments, as well as the continuous collection of data from IT decision-makers through sources such as online models included in subscriptions, surveys, cost analyses, contract analyses and in-depth interviews. Through continuously updated data and experienced consultants, an IT operation's costs, prices and efficiency are compared and optimised. Unlike many stakeholders, Radar does not need to begin each process by gathering facts or supplementing them with locally relevant comparisons, as these are already available in our databases.

Consultation and decision support
Radar offers advanced consulting services on IT management, sourcing and KPIs linked to IT production and benefits realisation. Radar's consultants have reference assignments in fields such as IT strategy, CIO support, skills provision, sourcing strategy, etc. on behalf of public and private-sector clients throughout Sweden. All advice is based on fact-based insights, i.e. Radar's data and measurement points for costs and effects on the Nordic IT market. Radar supports its customers with a unique combination of industry experience and underpinned facts in all of its consultancy assignments.

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