

BUDGETING FOR INTEGRATION

Effects of the paradigm change

#FlowHow from Entiros Integrations

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1. INTEGRATION BUDGETING

Accounting for the costs and return on IT service investments can be hard. Especially as the technology shifts come fast and new capabilities or changed ways of working is becoming the normality. This is especially the case in the 'digital integration' space where we are currently experiencing a paradigm shift. The traditional business case for integration, focusing on cost efficiency, is now complemented with a more strategic view on integration.

Indicators on the market:

- Integration is now the worlds largest IT challenge with 1 of 6 IT dollars globally spent on integration (Mulesoft research, 2016)
- For the first year, 2015, the integration spend was higher than the application spend in an average Swedish IT budget (Radar group, 2016)
- The integration market doubles 2015 - 2020

Recovering costs from customers of integration services (internal 'charge back') has traditionally covered charging for services and platform (sw/hw). This is now complemented by charging for the use of APIs themselves - with financial reporting and distribution built in to new API Management tooling.

As central integration departments move from delivering all integration themselves, into enablement and guidance of citizen integrators creating and using APIs within and outside the organization, the integration budget is now more distributed. Central initiatives invest in reusable assets and getting the organization as a whole to be capable of integrating as part of the company wide digitalization.

The basis for budgeting is still the metadata repositories of integration (including information about the application portfolio, enterprise integration assets, project costs, and operations costs). To this mix we are now adding new cost drivers - in a more open and decentralized approach of integration - that is about managing the large volume of integration points and integrations developers within and outside the organization.





2. THE CLASSIC INTEGRATION BUDGET

There are several business case resources for 'classic integration'.

A few examples:

- I. Gartner Group, 'Client Issues for Application Integration) November 6, 2003.
- II. Gartner Group, 'Cost Cutting through the Use of an Integration Competency Center or SOA
- III. Center of Excellence April 4, 2008.

Forrester Research, 'The financial impact of standardizing on a common data integration platform and leveraging an Integration Competency Center (ICC), 2007

Below are some of the KPIs and effects identified by Forrester (1-6) from III and Gartner (7-8) from I and II. These can be used to build a budgeting business case for the base benefits of integration. The below benefits are still there and should be appreciated.

	Year 1	Year 5
1. Integration dev productivity	+20%	+50%
2. Integration delivery cost		-40%
3. Application and project budget	-20%	-35%
4. New application ttm	-20%	
5. Selected admin function cost	-10%	-30%
6. Decision support cost	-20%	-24%
7. Integration project savings resulting from an ICC	-30%	
8. Integration savings on maintenance costs resulting from an ICC	-20%	

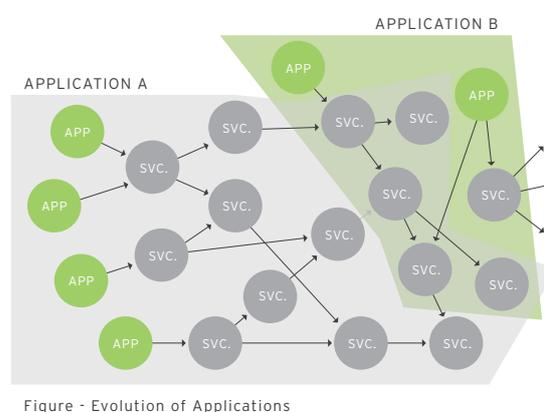
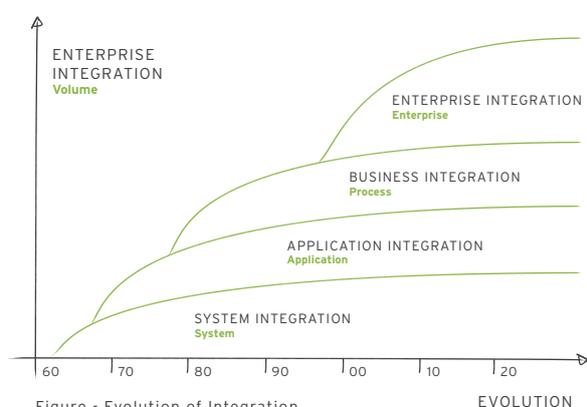
1. Improved developer productivity - Estimated productivity increases ranged from 20 percent in Year 1 to a 50 percent improvement in Year 5, as a result of a single enterprise solution. Advantages include a shared services environment and centralized governance around data integration, reduced reliance on hand coding, and the ability to optimize developer resources across projects.
2. Lower cost of delivery through increased reuse - The study projects a 40 percent reduction in cost by Year 5 due to reuse of data transformations and mappings across projects. Interviewed organizations with offshore outsourcing particularly benefited from the ability of third-parties to reuse existing data assets to lower costs and speed project delivery.
3. Improved data availability across applications and projects - Centralized governance through a standardized platform provided project teams with more ready access to distributed data. The resulting lower costs can range from an estimated 20 percent savings in Year 1, increasing to 35 percent in Year 5.
4. Faster time-to-market for new applications & capabilities - Time-to-market increases and associated costs savings are driven by the ability to leverage a more standardized platform. Compared to operating in a non-standardized environment, this can yield an annual estimated 20 percent savings
5. Reduced ongoing administration cost - Interviewed organizations benefited from the economies of scale created from the ability to consolidate administrative resources. As an organization centralizes these administrative functions, it can reduce the annual cost burden by 10% in the first year, increasing to 30% by Year 5.
6. Improved data visibility and accuracy for reporting - Interviewed organizations identified the ability of end users to gain greater visibility of data in less time through a centralized approach to data integration, supporting improved risk management, compliance and decision making. From customer interviews, platform standardization increases data visibility across projects, allowing faster audits and estimated cost improvements of 20 percent in Year 1, growing to 24 percent in Year 5.





3. PARADIGM CHANGE EFFECT ON THE INTEGRATION BUDGET

The previous chapter highlighted 'traditional integration', i.e. the integration paradigm used primarily before 2015. Integration has evolved over decades as described in graph below. Each era has had its recommendation on people, process and technology to solve the integration challenges.



The 'Architecture of the World Wide Web' has since its introduction in early 1990 gained momentum **between organizations**. The anarchic architecture of today's Web is the culmination of thousands of simple, small-scale interactions between agents and resources that use the founding technologies of HTTP and the URI as defined by 'REST' solutions commonly known as the 'Internet'.

During 2005-2015 we have seen the rise and fall of top-down managed Service Oriented Architecture (SOA) supported by centralized Enterprise Service Bus (ESB) frameworks and comprehensive standards like 'Web Services' (WS-*) within organizations.

The new era of integration **within organizations** adopts the same principles currently used in the larger context of the Internet but with the addition of enablement and guidance to ensure business outcomes are predictable and aligned in the organization.

This is 'bottom-up SOA' or 'SOA done right'. APIs, micro-services and DevOps are key.

Integration in the previous era was provided only by central "integration delivery centers" (IDC) where integration was delivered by a central team, many times requiring complex skills. In the new era integration is done by ALL application developers. Enablement and guidance is provided by integration competence centers (ICC) that also provide new tooling to support the new era in the form of API Management Products with API Developer Portals and API Policy Management to enable self-service of API developers.





3. PARADIGM CHANGE EFFECT ON THE INTEGRATION BUDGET

Budgets are increasing fast in the integration area the last few years with key drivers.

I. Digitalization of our society and businesses

Applications are becoming smaller (micro services) and more distributed (in-house, cloud, managed service, SaaS, PaaS). Internet of Everything (humans, digital, things) are rising. Everything will be digital and everything needs to connect.

Effect on budget (Capex and Opex):

Volume of every day integration increasing faster in 2017 than ever before effecting both amount of integration initiatives and operational assets.

Goal: Follow the digitalization trend and stay competitive.



Figure: Digitalization

II. Integration capability is a strategic asset

Not only to work together within and between companies but also to reach employees, partners and consumers in new business models and channels.

Effect on budget (Capex):

Investments increasing in integration as a strategic asset to increase 'connected company maturity'. This increase as the focus of integration shift from cost cutting internal processes into beating competition with speed on the market. Reusable services are built to improve speed with 3X by reuse (see figure) vs. point-to-point beating the competition in launches.

Goal: Be faster than the competition.

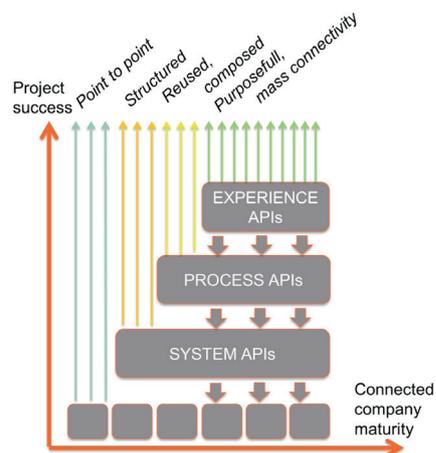


Figure: Reuse maturity/speed

III. Spreading the integration capability

As it must be present in the company as a whole to meet the competition. The integration department can not be a bottleneck to change.

Effect on budget (Opex):

Enablement costs increasing due to new services - Enablement and Guidance - provided by the central integration department, allowing the business as a whole to integrate faster through self-service with maintained alignment with company goals.

Goal: Allow for the business as a whole to digitalize itself Be faster than the competition.

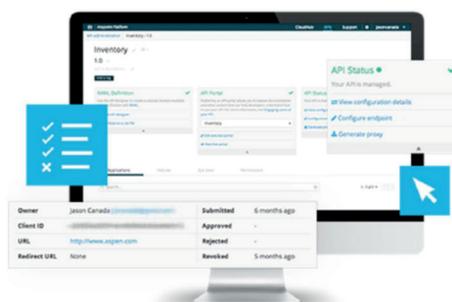


Figure: New tools - API Portals





4. WHAT TO EXPECT OF THE FUTURE

Resulting items in budget that might be new/updated in 2017 and the future

- I. Increased volume of integration in projects
- II. Increased spend in projects to create reusable assets
 - mainly APIs in addition to platforms
- III. Increased spend on enablement and guidance
 - mainly new services in ICC + API Management tools

The main justifications in the past was related to 'direct benefits' of integration

- Cost savings
- Reduction in complexity
- Reduction in staff training
- Reduction in manual processes
- Incremental revenue linked directly to the project
- Governance and compliance controls that are directly linked

The main justifications now are more related to 'indirect benefits' of integration

- Staying relevant in digitalization, exposing APIs to offer services in new ways
- Creating new revenue streams through APIs
- Increase in market share through new market reach by 3rd party channels using APIs
- Decrease in the cost of future application upgrades, by micro services use and integration
- Improved data quality and reporting accuracy by instant (not replicated) access to data in APIs
- Decrease in the effort required for integration projects, by reuse of APIs
- Reduced waste and rework in projects by reusing APIs
- Improved quality of work for staff and reduced turnover of staff by investing in APIs (and not p2p)
- Better management decisions, by better structure and better access to decision data both analytical and operational data through APIs
- Ability to adopt a managed service strategy in APIs instead of services for each project
- Increased scalability and performance
- Improved services to suppliers and customers
- Increase in transaction auditing capabilities
- Decreased time to market for mission-critical projects
- Increased security features
- Improved regulatory compliance



LET'S INTEGRATE

Do you want help setting up an integration budget or do you have any questions please feel free to contact us.

GUSTAV ROSÉN
INTEGRATION ARCHITECT

MOBILE +46 (0)76-04 04 793
MAIL gustav.rosen@entiros.se

NILS KANEVAD
ADVISORY INTEGRATION ARCHITECT

MOBILE +46 (0)73-517 60 21
MAIL nils.kanevad@entiros.se

