

EXECUTIVE OFFICE

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RESOURCES AND SUPPORT

Update on IT implementation

Cover note

The present decision on 'EFSA operational IT strategy 2014-2018', which was signed by EFSA's Executive Director in July 2013, is tabled for information in view of the discussion and possible adoption of EFSA's Multiannual Plan 2014-2016.

The decision highlights:

- The IT priorities which will guide IT architecture, programmes and services for the period 2014-2018
- The high level governance rules to ensure IT alignment with business priorities
- The high level governance rules to ensure a 5-year business transformation portfolio is executed on plan while balancing short and mid-term objectives
- The principles by which IT systems will develop an integrated IT architecture.

EFSA Operational IT Strategy

Strategic Plan for Information Technology of the European Food Safety Authority for

2014-2018

Adopted by Decision of the Executive Director

1 | Executive Summary

1.1 | Introduction

Information Technology (IT) is now a highly integrated and necessary part of EFSA’s overall functioning. It is an important enabler of EFSA’s strategy – specifically for the automation of business process which should operate more efficiently, more effectively and with greater transparency toward EFSA stakeholders and the public.

This document explains how we ensure engagement of Information Technology with the rest of the organization through:

- a consistent mapping of IT priorities and objectives to EFSA’s strategic priorities and objectives
- a unifying vision for EFSA’s IT architecture that balances business process support, cost-effectiveness, and ease-of-use
- an overview of the governance rules for making decisions about IT

EFSA’s approach to describing its IT Operational Strategy is following a recognized best practice and this document covers each area of this standard.

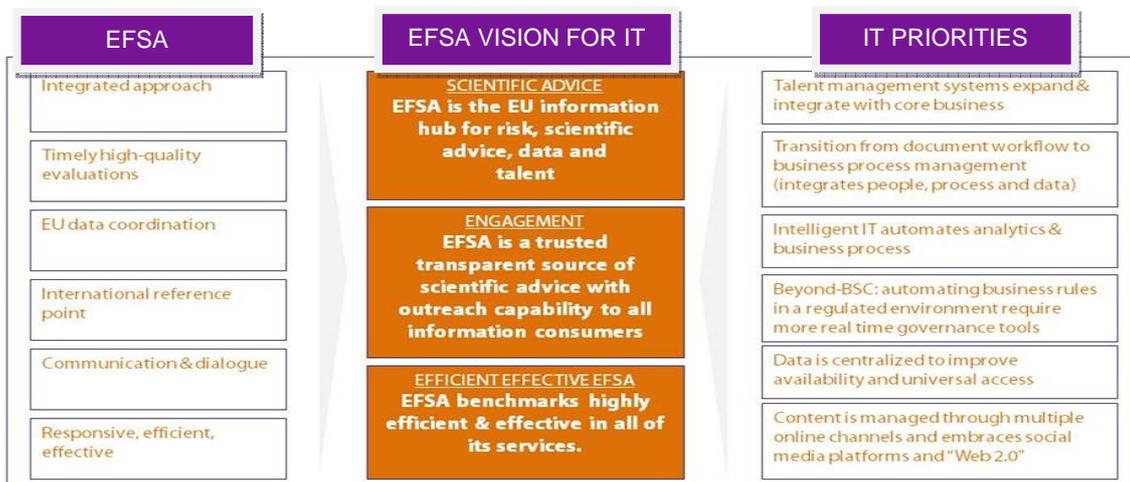
The standard is widely used in other European agencies and we have adopted it in part to permit greater dialogue across European agencies. The ambition of this dialogue is to ensure we maximize the value of a common approach and potential synergy.



Figure 1: EFSA IT Strategy Standard

The changing context in which EFSA finds itself has led the Authority to pursue six key strategic and outcome-oriented objectives on which it is focusing its attention. These objectives are described in the Strategic Plan of the Authority. In addition to these objectives, IT should support the current European context and its need for increased complementary collaboration, cost-benefit proportionality, and transparency initiative to improve and maintain public trust.

Figure 2: EFSA Objectives, Vision driving the IT Operational Strategy, & the 6 IT Priorities



In response to these EFSA objectives, the Authority establishes six priorities for IT, and each of these objectives contributes to realizing the vision which guides our IT Operational Strategy:

- **EFSA is the EU information hub for risk, scientific advice, data and talent**
- **EFSA is a trusted and transparent source of scientific advice with outreach capability to all information consumers**
- **EFSA benchmarks highly efficient and effective in all of its services.**

1.2 | IT Priorities 2014-2018

The strategic plan expands the argument for how each of these priorities directly supports the vision and how the IT solutions evolve. The priorities are summarized below.

Talent management systems expand and integrate with core business

EFSA's core business operates by bringing together human expertise to work on specific problems. The changing nature of the problems – and their time sensitivity – require timely and accurate *identification* of the skills needed to solve the problem, their effective *recruitment* from a global talent pool to a time or quality bound effort, and the *administration* of the financial, legal, and logistic, aspects of the work.

Human resource systems provide standardized processes for managing these flows efficiently and effectively, but have mainly focused only on personnel administration. Similarly, EFSA's custom expert databases and custom core business workflow applications are developing to catalogue the relevant EFSA scientific skills, but they are not integrated with the administrative and financial systems.

IT should implement solutions which harmonize the work so that the global skills relevant to food and feed safety – inside or outside the organization – are managed in a seamless flow of work enabling speed, performance, and a reduced administrative burden.

Document workflow systems transition to business process management solutions

Workflow is a form of *technology* that automates interactions between people and technology. Specifically, it coordinates the interactions between manual tasks by people and systemized tasks like storage, time stamping and data transformation. EFSA has implemented workflow management systems that are primarily document-based. This type of workflow enables the routing of semi-structured data between people – but it does not address the need for coordination and collaboration between people, nor the need for interactions between structured and unstructured data that are used by people

Business process management (BPM) is a *discipline* that emphasizes a holistic approach to coordinated work across all of the resources that are part of a business process in an organization – people, information, and machines. In these solutions, document workflow is only one form of overall business process coordination. While BPM can be considered an advanced form of workflow, its key differentiator is that it treats all of these resources in the same manner, and with the same language. By doing so, it enables very advanced forms of group collaboration, data integration, business event handling and performance management, and these can be traced directly to EFSA business objectives.

Beyond Balanced Scorecard: automating business rules require more real time governance tools

As information flows more rapidly through the organization and as key business processes become automated to improve EFSA's efficiency, the management and knowledge workers of the information must improve their ability to plan and monitor in real time what is happening in the organization. IT must deliver solutions that go beyond periodically updated rearward looking systems. These solutions must provide real-time performance evaluation of the process bottlenecks, errors and exceptions, resource usage, and performance improvement simulation.

Intelligent IT automates analytics & business process

EFSA must become more efficient and effective. With limited internal resources, and with an ambition to become both more efficient in its core remit, while also becoming the EU hub for relevant information, we must codify and automate more of our work. Intelligent IT goes beyond the automation of simple administrative tasks. By codifying analytical decision models and business rules, we can significantly enhance the capability of the knowledge workers in EFSA to perform the tasks they are more suited to, while relying on machines to find and inform users of complex links between information. This is an IT priority to allow for better and faster risk assessment, identification of conflicts of interest, and support for complex decisions.

Data is centralized to improve availability and universal access

The physical centralization of data provides advantages that are critical to the success of EFSA as a European data hub for information on food and feed safety. Data which sits in different locations tends to acquire different structures – and different structures make data compatibility difficult. The solutions to linking disparate data drive up costs and often interfere with performance loss associated with shuttling data between complex interfaces and over long distances. Data that sits in the same place is easier to clean and maintain clean, easier to index for effective searching, and provides indirect benefits such as encouraging process and organizational standardization.

Content and embraces social media platforms and “Web 2.0”

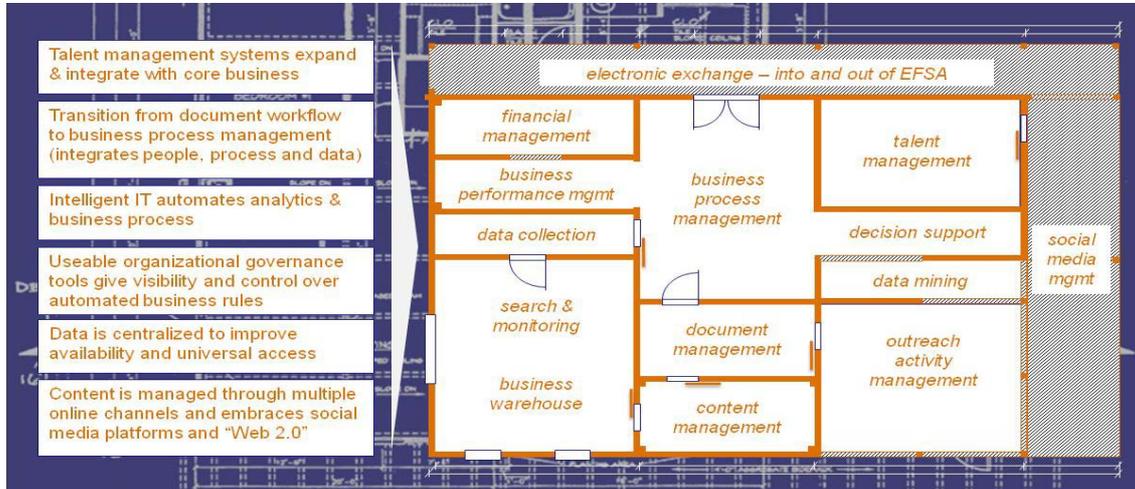
Web 2.0 is a widely used concept and a broad set of technologies which fundamentally change the way in which content is created, transformed and managed. The concept is used to describe an organization with a social presence in an information based world and an interaction between that organization and all individuals who have an interest in the information of that organization. The technologies enable highly accessible and highly scalable publishing and information gathering techniques. For EFSA to achieve its ambitions for transparency and public trust, we need to adapt our information technology and our processes and capabilities to the realities of the modern world – one in which the external and non-controllable users of information define how EFSA information is used and transformed. At the same time, the technologies within the organization must ensure that the traceability and integrity of the data used for the purpose of assessing risk are protected.

1.3 | IT Solutions

An organization's or an individual's needs are almost always served by the application of standard architectural patterns which have proven themselves to be efficient and effective in flow and comfort and the satisfaction of needs. This is noted in all architecture, whether for bridges, buildings, or IT. While new creative

architectural patterns can be developed – for most organizations choosing to apply a pattern will result in lower cost and greater suitability.

Figure 3: The 6 IT Priorities & the standard IT solutions supporting them



Within EFSA, the six priorities for IT (themselves directly supporting EFSA strategic objectives) are supported by a core architecture built on mature technologies. Additionally, some innovative emerging technologies in social media management and decision support will meet the EFSA needs toward the end of the decade.

1.4 | Business Process and Organizational Capability

To benefit from either mature or emerging technology, EFSA must make business process design, implementation and capability development an integrated part of its journey toward the EFSA vision.

Automation of end-to-end business process and complex systems generally results in a more rigid environment than one in which human beings self-organize and change. For this reason, EFSA must ensure that its processes are well designed, effective, and efficient before they are automated. Put simply, automating mistakes with computers will only result in the generation of more mistakes – faster. Because IT Systems are expensive, implementing poorly designed processes erodes the original business case very quickly.

Human capabilities are another fundamental pillar of realizing the architectural vision. Project management, process work, data analysis, data mining, and autonomic computing are applications which require users to master the tools. Without high competence levels in the tools, users will tend to revert to parallel manual business process and blame the tool or the process. Put simply through example, driving a car without mastering driving results at best in high maintenance and fuel expense, and at worst in expensive accidents.



Figure 4: Holistic Business Transformation Best Practice

To succeed in its continued evolution, EFSA must holistically balance the improvement of process, people and the IT tools.

1.5 | Governance

EFSA is in the middle of a transformation from a static establishment plan driven by its Multi-Annual Planning (MAP), to a project and resource management approach which allows for a more dynamic approach to allocating resources to the priority mandates received from the European Commission, European Parliament and Member States. Simultaneously, the vision requires a significant evolution of its capabilities and competencies – and these are in large part standardization initiatives. This represents a major business transformation for EFSA.

Successful business transformation initiatives incorporate frequent “learning milestones” and reserve resource and time to adjust course toward the strategic objective. Simultaneously, the European context requires stability of the financial resource plan for IT. EFSA governance of IT must adapt itself to these challenges in the following manner.

- The IT governance will be part of the overall business project governance of EFSA
- The financial resources will remain stable at 2013 level through the 2014-2018 period and each year a prioritisation of new projects will be adjusted to fit within the top-down resource cap, considering the ongoing investments in running services and ongoing projects
- The annual transformation agenda will be driven mainly by this strategy in lieu of short and mid-term challenges and opportunities.
- An annual reserve of 15-25 % will be kept by the management team for funding externally-driven requirements (ex., IAS/ECA - EC) and allocated following the financial regulations to gaps identified in learning milestones or high impact short-term opportunities.
- The management team will determine each year the allowance of annual reserve.
- The annual project portfolio and commitments are made considering the full portfolio and execution of the 5 year strategy – no specific reserves are made for any individual program or organization. Doing so would undermine the flexibility of the organization to adapt itself to learning milestones.
- The full strategic portfolio will be monitored by the management team considering each project business case – and considering multiple views on the portfolio to ensure continued balanced progress in all strategic priorities.

1.6 | Supply

The IT mission is to help EFSA excel in the performance of its business processes, by:

- supporting EFSA's ambition for transparency and trust by making information and processes available, accurate consistent;
- taking a leading role in opening boundaries, bridging process silos and introducing shared standardized solutions;
- ensuring all IT products (built or bought) and all IT services (in-house or outsourced) are customer-oriented, cost-efficient, and fit-for-purpose;

- lifting IT competencies and capabilities of EFSA staff to allow for a more user-centric and self-service-oriented technology use.

The transformation of our business processes and IT will require trade-offs in technology, business process, organization and risk. Principles help set clear direction and provide focus in the execution of EFSA strategy. Specifically, a guiding set of IT principles help EFSA management quickly make IT decisions that are consistent with the IT thematic strategy and EFSA overall strategic objectives.



Figure 5: IT Principles

Innovate

IT will deploy an organization which proactively enhances business performance and which inspires innovation within EFSA. Multi-functional, ad-hoc competence centres will be created to support innovation. An innovation process will be deployed to facilitate decisions on evolution of this IT strategy and challenge institutionalized assumptions. The IT governance body will manage risks & place bets on multiple innovative projects and then consistently re-invest on those with promise.

Maximize value through an outsource approach

IT will procure from reliable stable suppliers to mitigate COTS risks and maximize value based on benchmark cost & performance models. All contracts will have measurable performance targets for quality of product and service and financial rewards and penalties (including payment) will be linked to the targets. COTS introduces supplier dependency risks, therefore EFSA will procure based on long term viability and demonstrated performance of supplier.

Organize for business process performance

IT will focus its expertise on EFSA business process and knowledge. Where economically advantageous, EFSA will outsource IT capabilities that are horizontal and non-differentiating. The IT organization will focus on supporting business process and project management, service delivery management, and technology advisory. IT performance will be measured on the ability to maximize business value through business-oriented metrics, on service delivery to agreed targets, including customer satisfaction, and on contribution to good governance. IT will support and advise EFSA in order to segregate nice-to-have from need-to-have and design for value.

Centralize data and applications

Consolidating data and applications is critical for managing data accuracy and data availability, internally and externally; and for optimizing work flows. EFSA will prioritize application & data centralization ahead of unit-level process efficiencies, because the Authority's objectives depend on data centralization.

Buy Commercial-off-the-shelf software program packages & interfaces

Procurement of commercial off-the-shelf packages and cloud based solutions improves the cost, reliability, and maintenance profiles of IT. EFSA will always prefer IT components from a strategic software platform. If the platform does not provide the

needed function, “best-of-breed” selection is preferred to custom development. When development is necessary, a 5 year total cost of ownership model will support the decision. Procurement evaluation models will reflect these preferences. Exceptions can only be made by decision in the management team.

Exploit existing platforms

Whenever possible without compromising the overall IT architecture and business vision, EFSA will re-use, reduce and repurpose existing platforms and programs in order to leverage investments and improve IT total cost of ownership. Whenever possible, EFSA shall reuse or share solutions with other EU organizations, and these should always be considered in software evaluations. EFSA will seek to leverage both existing commercial software and custom development that support the strategy. Business cases introducing new software must be approved in the IT Governance Body based on tangible performance and financial targets which will be monitored.

In addition to these principles, IT will maintain and provide, under the high level IT governance, a number of decision matrix tools to accelerate trade-off decisions in alignment with the business strategy.

This document contains the strategic IT contribution to EFSA success, those that are integral with the EFSA strategy and that should survive multi-annual planning. For this reason, it focuses on the business context and the business objectives. Other aspects of IT governance and supply should be revised and communicated periodically, as is recommended by best practice. The revisions will be driven by learning milestones and in response to execution priorities and needs of the annual plan.

Two additional documents are in draft and will be published by end September 2013, in order to document those detailed work plans, technology roadmaps, procedures and organizational models which must change in response to annual execution priorities and learning milestones. The rolling plan of the major initiatives will be validated by September 2013 and is provided – in its draft status – below.

Figure 6: Multi-Annual Transformation Plan

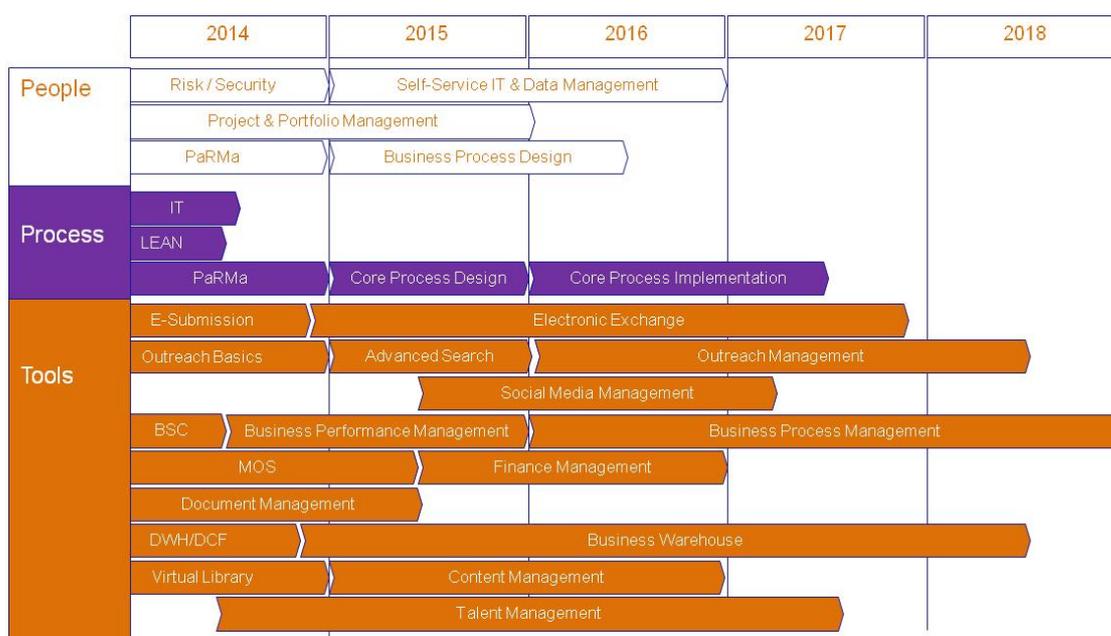


Figure 7: Multi-Annual Draft IT Financial Plan

Category	2013 Basis	2014	2015	2016	2017	2018
ITTitleI	2,1	2,1	2,2	2,2	2,3	2,3
ITTitleII	3,6	3,6	3,4	3,0	3,0	2,7
ITTitleIII	5,8	5,8	6,0	6,3	6,3	6,5
Total	11,5	11,5	11,5	11,5	11,5	11,5

1.7 | Risks

EFSA recognizes that the Authority is working on the 2014-2018 Strategy and the 2014-2016 multi-annual plan. Should the objectives change, this IT Operational Strategy will be reviewed and revised if necessary.

Beyond this, EFSA has identified 4 main risks to the implementation of this strategy and will implement mitigation strategies to avoid or minimize the risks.

Business process and end-user competencies are not in place in time for the IT

To mitigate the risk of non-productive IT, the periodic review of the portfolio and each project's major milestones for launching and closing will be reviewed with a readiness checklist. Prior to the decision to commit EFSA resource to IT, the assessment must conclude on the status of advancement of the process and capability aspects of the transformation. While this mitigation strategy does not prevent delay in the overall strategic execution, it does ensure that investments are put to good purpose.

IT strategy depends on a strategic portfolio not yet confirmed, or setbacks occur in projects

By September 2013, EFSA will detail the plan and confirm the financial resources are suitable to the task. IT planning and external advisors have already confirmed the feasibility of the plan at high level. The timing of this planning coincides with confirmation of the 2014-2020 MAP for EFSA. With regard to the IT strategic portfolio, transparent reserves for time and money will be put in place to allow for learning milestones and setbacks in the portfolio. To maintain transparency, these will reserves will not be embedded in project plans and will be held as a single pool at management team level.

The EU context might require sharp reduction in available resources

The IT strategy aims to achieve its vision by 2018, or 80% of the duration of the 2014-2020 MAP. A reduction in resource of up to 20% should allow for completion of the transformation within the cycle.

Replacing or re-engineering EFSA core business applications can be disruptive

RAW and ESS are two IT applications vital to EFSA's operations. IT will make the technology roadmaps available for internal consultation and the roadmaps for these applications will avoid "big-bang" change. Only progressive functional shift will be allowed and should mitigate disruption risk. Furthermore, as Commercial Off-the-Shelf (COTS) software begins to replace the EFSA custom developed software for cross-functional business process management, avoiding customization of the COTS and adopting a tactic of integration in those instances will avoid one of the primary risks of COTS implementation.

1.8 | Conclusion

EFSA IT has continuously matured since its founding in 2003 and has been recognized at major review milestones by external industry experts and European Commission auditors (Gartner, IAS) as advancing positively in quality of service and effectiveness. Nevertheless, in order to meet EFSA's vision for 2020, the IT must make significant transformation during the period 2014-2018. The application of the IT resource is driven directly by EFSA strategic objectives.

IT projects are not sufficient to realize the vision. A holistic and integrated program addressing process and people's capabilities will drive the IT agenda and plan.

Because EFSA's vision for IT depends on strong data and process integration, and the movement of information and data smoothly, the IT principles and IT priorities, and the scope of the transformation plan include all IT within EFSA, that managed by the IT systems unit, and also those information technologies and databases acquired through procurements and grants which directly contribute to making EFSA a European information hub.

EFSA will maintain financial stability and a steady capped IT resource plan during 2014-2018. The organization realizes that the transformation agenda will consume most of this resource and there will be little room during the next 5 years for short and mid-term opportunities not directly driven by the strategy.

Successful business transformation requires strong management team sponsorship, frequent learning milestones with course correction and consequent reserves of time and resource. Therefore the governance of IT will be even more tightly integrated with the overall EFSA governance.

The present Policy shall enter into force on the day following the date of its adoption.

Done at Parma, 9/07/2013

[SIGNED]

Catherine Geslain-Lanéelle
Executive Director