National Center
for Infection Control

Project Report - Follow-up Project
Swiss Infection Prevention Platform

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Inhalt

1. Executive Summary

The Follow-up Project Swiss IPC Platform was launched to further investigate the feasibility of a national *Infection Prevention and Control (IPC) Platform* in Switzerland. Supported by the Federal Office of Public Health (FOPH), the project team assessed commercial IPC software, estimated implementation costs, explored funding sources, and examined legal requirements.

The proposed *IPC Platform* consists of two components: an *IPC Toolkit*, a software installed locally in hospitals to support infection prevention and surveillance activities, and an *IPC Datacenter*, a national database for data aggregation and analysis.

The **in-depth evaluation** of five commercial software solutions showed that installing an *IPC Toolkit* can improve task management, communication, and efficiency in a hospital's IPC teams. However, shortcomings of the available commercial solutions, such as system integration issues, lack of advanced analytical tools, and limited multi-hospital functionality, became evident. Furthermore, no software is fully adapted to Swiss requirements. We conclude that further development and collaboration with a chosen provider will be necessary.

The **Swiss Quality Commission (EQK)** is seriously considering funding the development of the *IPC Platform*.

The project explored **synergies with other digitalisation projects** in the Swiss healthcare, including DigiSanté, Nasure, and the Swiss Sepsis Program, to ensure compatibility and avoid duplication. Additionally, discussions with ANRESIS, ANQ, and the hospital associations H+ confirmed broad interest in and support for the *IPC Platform* project.

A **legal assessment** has been conducted. Swissnoso modules and the planned *IPC Platform* are compliant with the law, provided that the relevant technical and organizational measures are implemented.

If successfully implemented, the *IPC Platform* will significantly enhance infection surveillance, improve hospital workflows, and strengthen infection prevention and control in Switzerland.

Swissnoso recommends continuing the *IPC Platform* project. Once the funding is secured, we recommend the following to realise and sustain the *IPC Platform:*

1. **Collaborating with a commercial provider:**
   Swissnoso partners with an experienced commercial provider to leverage their technical expertise, ensuring the *IPC Platform* is reliable, scalable, and aligned with industry best practices. The partnership includes a requirement to make the platform's semantic, structural, and workflow features publicly accessible, allowing other commercial and non-commercial providers to align their products to this national standard.
2. **Support from FOPH and Digisanté:**
   FOPH and DigiSanté provide tangible operational support to the Swissnoso project team to ensure that the *IPC Platform* fully aligns with DigiSanté's requirements and integrates seamlessly into the planned Digital Mesh architecture. This support includes facilitating expert consultations and providing detailed documentation on the expected technical and regulatory standards.
3. **Coordination with other FOPH and EQK projects:**
   FOPH and EQK support in aligning federally funded projects—such as Anresis, Nasure, and the Swiss Sepsis Program—to create a cohesive and sustainable digital framework for infectious disease risk management. Their engagement ensures strategic coordination, long-term integration, and operational efficiency across initiatives.

4. **Ensuring long-term sustainability:**
   FOPH supports Swissnoso in identifying funding and resources beyond the initial project phase to support the ongoing operation, maintenance, and evolution of the national *IPC Platform* as a core component of the NOSO Strategy.

Swissnoso has submitted a detailed project proposal and project plan to the EQK and can start developing the *IPC Platform* as soon as funding is secured.

2. Aim of the report

This report summarises the results of the 'Follow-up Project Swiss Infection Prevention Platform'. The project was supported by the FOPH with subsidies (Verfügung 142006802 / 332.11-90/76) and included the following five objectives translated into five work pages:

1. In-depth evaluation of commercial software solutions
2. Identification of implementation and maintenance costs, development of a business model, and evaluation of potential funding sources
3. Synergies with other projects in Switzerland
4. Integration of existing and planned Swissnoso surveillance modules
5. Clarification of the legal framework

3. Background

In 2023 and 2024, with the support of the FOPH, Swissnoso carried out a preliminary project in which the concept of a national *IPC Platform* was designed and developed. Requirements were defined, and a feasibility study was carried out.[1] Technically, the *IPC Platform* consists of two components: a software package installed locally in the hospital (*IPC Toolkit*) and a national data center (*IPC Datacenter*).

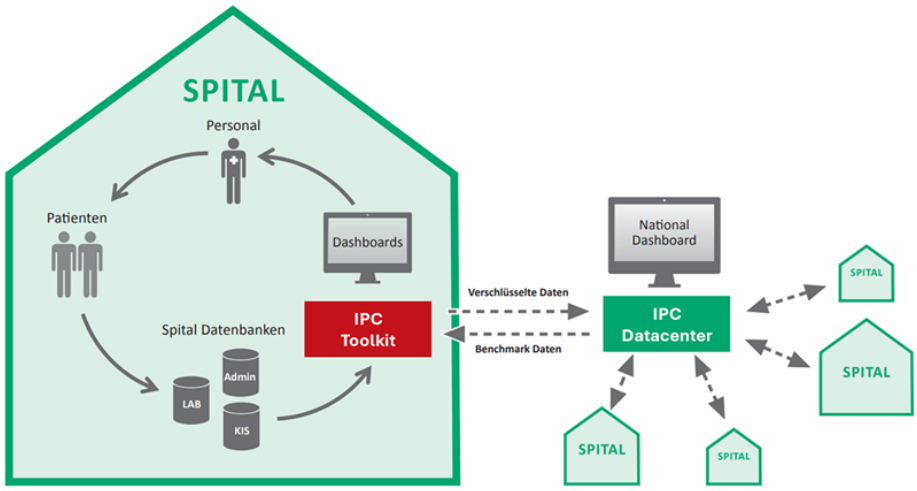

Figure 1: *IPC Platform* consists of two components: an IPC software installed locally in the hospital (*IPC Toolkit*) and a national data center (*IPC Datacenter*).

The *IPC Toolkit* will be a software suite designed to run locally within hospitals' security perimeters. This software will enhance IPC efforts by enabling semi- and fully automated surveillance of healthcare-associated infections (HAI) and it will support daily tasks of the hospitals' IPC teams, such as managing multi-drug resistant organisms (MDROs), isolation management, and contact tracing. The *IPC Datacenter* aggregates pseudonymized data on a national scale, generating insightful reports and facilitating benchmarking, quality improvement projects, and broader applications. With the necessary ethical clearance, these data can also serve research projects.

Swissnoso aims to improve the implementation of infection prevention measures in Swiss acute-care hospitals to reduce the incidence of healthcare-acquired infections (HAI). The *IPC Platform* supports hospitals in implementing best practices and facilitates the implementation of the minimum structural requirements for the prevention and control of HAI. The *IPC Platform* is, therefore, an important element in the targeted reduction of HAI in the FOPH's NOSO strategy.[2,3]

In the following, we describe the results of the five work packages:

4. In-depth evaluation of commercial software solutions

4.1 Aim

The evaluation in the pre-project 2023 revealed that three commercially available software providers fulfill the core requirements. Two more were added during the follow-up project 2024, one that we evaluated in the preliminary project, the software of which we considered as insufficient but has matured since. The software of the other provider was brought to our attention in the meantime.

We conducted a thorough evaluation by visiting hospitals, engaging with national authorities, and assessing compliance with detailed requirements. Interviews with software users provided insights into the usability features of their software and the practical benefits for hospital IPC teams, national surveillance platform operators, and government agencies in their daily work.

4.2 Procedure

Semi-structured interviews with end-users

We have conducted semi-structured interviews with end-users from five different IPC software products. This included in particular, people in the IPC department in hospitals, but also authorities who use the software for HAI surveillance.

These interviews offered valuable firsthand insights into the users' experiences, challenges, and expectations concerning the software solutions they use. The semi-structured format enabled us to explore predefined topics while allowing participants to share further insights and elaborate on their specific contexts.

Semi-structured interviews with vendors

In addition to engaging with end-users, we also held discussions with representatives from the software vendors. These interactions helped us gain a deeper understanding of the software's functionalities, development processes, support structures, and the internal expertise and strategic goals of the companies providing these solutions.

4.3 Results

Benefits of working with the software

The evaluation of the software yielded very positive results, with all participating hospitals expressing a strong desire to continue using it, highlighting its essential role in their daily operations. A key advantage was its ability to streamline organization and task prioritization. These applications provide a structured overview of upcoming tasks, such as patients newly diagnosed as multidrug-resistant organisms (MDRO) carriers, those requiring adjustments to antimicrobial therapy based on laboratory results, patients needing isolation precautions, or cases of suspected surgical site infections. Case profiles can be manually prioritized, and workload can be efficiently distributed among team members, each receiving a personalized to-do list.

Furthermore, the software supports HAI surveillance, enabling time savings through semi- and fully-automated processes. Existing filter and data population features can be further enhanced with Swissnoso's algorithm to increase automation and efficiency.

Many users emphasized how the tool enhanced collaboration between the IPC teams and other units, fostering better communication and coordination. This improved teamwork was especially beneficial in handling cases more efficiently. The enhanced exchange facilitated the implementation of programs, such as those aimed at reducing the incidence of HAI.

We have summarized in a document how the software facilitates daily work and its impact on patient safety (**Appendix 1**). As a first step, we will focus on workflow improvements in IPC and HAI surveillance with corresponding adherence monitoring. Other areas, such as antimicrobial stewardship, remain open for the moment.

Challenges of working with the software

The interviews highlighted various areas needing improvement in the software and its implementation. Effective change management was recognized as a critical factor, as inadequate training or support can result in so-called "workarounds," where users bypass the system rather than using it as intended. The integration of the software into the clinical information system (CIS) was deemed essential, with some facilities experiencing challenges in achieving seamless functionality. Furthermore, not all user interfaces were equally intuitive, which sometimes hindered usability and adoption among staff.

Another limitation shared by all systems is the absence of robust epidemiological analysis and visualization tools within the software, which compels users to frequently export data for processing in external programs. Additionally, these software solutions do not yet function across multiple hospitals, which would be especially advantageous for managing transferred patients requiring isolation between facilities. Finally, the evaluation indicated that the various solutions are at different stages of development, leading to an inconsistent user experience depending on the specific tools utilized.

Potential of the different software solutions

The evaluated software solutions possess distinct strengths and weaknesses, with varying levels of development in certain areas. For instance, some systems feature a well-developed IPC module but lack robustness in the antibiotic stewardship component, whereas others display the opposite. A significant limitation common to all software is the lack of integration with standards specific to Switzerland, such as the Swiss Classification of Operations (CHOP). However, most international standards like HL7, FHIR, LOINC, and SNOMED-CT are typically supported.

It is not possible to transmit data from the software to the local CIS system, such as order sets for isolation precautions or follow-ups for physician sign-off, due to the CIS provider’s refusal to accept data from IPC

software solutions, among others for legal reasons. Integrating these functionalities into a single platform would significantly improve the user experience.

Furthermore, graphical representations of results and integrated analytical tools were consistently found to be inadequate, offering limited options for visualization and in-depth analysis. Despite these shortcomings, the software solutions remain valuable in streamlining daily IPC workflows.

The willingness of providers to invest and expand into the Swiss market varies significantly, which may impact the speed and extent of improvements tailored to our local context. Furthermore, the level of expertise in IPC and workflow engineering varies considerably among software providers, influencing both the quality of their solutions and their ability to adapt to the specific needs of IPC teams. These differences are reflected in their business and development strategies, with some companies demonstrating a strong commitment to continuous improvement and local adaptation, while others focus primarily on broader market expansion. This variation may affect the pace and relevance of future enhancements tailored to the Swiss healthcare system.

4.4 Discussion

The in-depth evaluation revealed that collaborating with a provider is feasible, as each solution and company showcased its strengths and weaknesses. No software has yet been tailored to the Swiss market. Further development is required in all solutions. Consequently, no clear prioritization among the options has been established. The key factor for selection is not only the existing solution but also the willingness for further development and the expertise within the company to do this successfully.

As the next step, Swissnoso will invite the providers to respond to a Request For Proposal (RFP) to receive formal proposals. Based on these submissions, Swissnoso will select a partner to collaborate with.

The planned partnership and its framework will be outlined in the following chapter. This approach ensures that the selected solution aligns closely with Swissnoso’s needs while allowing the chosen provider to address any identified gaps through targeted enhancements.

5. Identification of implementation and maintenance costs, development of a business model, and evaluation of potential funding sources

5.1 Aim

A key goal of the project was to secure funding for the platform's development and to create a sustainable business model for its ongoing operation. A crucial factor for the success of the national rollout is ensuring that the *IPC Toolkits* provide an optimal price-performance ratio for hospitals. This is vital for encouraging hospitals to actively participate in the project, thereby guaranteeing its widespread implementation and long-term viability.

5.2 Procedure

Literature research and discussions with providers

To define the costs, we asked all vendors to provide a cost estimate. However, we couldn't share precise requirements at this stage, as caution was necessary in case the project later requires a public tender process. While some providers gave us verbal estimates, one provided written indicative prices. Additionally, we reviewed several studies and posters that examined the costs and benefits of similar software solutions. Although these studies were not conducted independently (as the authors received funding from the

respective providers), they still offer a useful impression of the potential advantages such software can bring to hospitals, particularly regarding operational efficiency and improved infection prevention outcomes.

Meetings with interested hospitals

Discussions with interested hospitals helped us to understand their conditions for participation in the project.

Funding of the project

We evaluated various funding sources for the project.

5.3 Results

Cost-benefit for hospitals

The benefits of an *IPC Toolkit* depend on how the hospital's IPC department is organized. IPC teams with few digital tools benefit more than teams with sophisticated systems and work processes.

In the following, we summarize the findings from the interviews and the literature review.

- The introduction of an *IPC Toolkit* optimized processes at the Royal Chesterfield Hospital (569 beds). The daily work in the IPC department was reduced by **41%**. This corresponded to a **time saving of 14.5 hours** per week per team member (**Appendix 2**). The time saving in the area of data management allows IPC staff to perform their core tasks and invest their valuable time to promote adherence to evidence-based prevention measures (multimodal interventions), systems design, and patient safety.
- A further study has shown that by using the antimicrobial stewardship module of the software the **length of stay** of patients treated with antimicrobials could be reduced by **18.9%** and the amount of prescribed antimicrobial therapies fell by **12%**. This study was conducted at the Centre Hospitalier Universitaire de Sherbrooke (677 beds) in Canada.[4]
- The staff at Nancy University Hospital (1500 beds) found that the introduction of the *IPC Toolkit* increased the IPC team's **responsiveness**, improved the **alert system** and established **better contact with departments**. The hospital was able to allocate more human resources to HAI surveillance as a result of time-savings, thanks to the *IPC Toolkit*.[5]
- A similar conclusion was reached at Dorset County Hospital NHS Foundation Trust in England. The *IPC Toolkit* was found to be particularly effective for reporting, easily creating isolation lists, contact tracing and lists of multi-resistant organisms. The Surgical Site Infection (SSI) module has encouraged the IPC team to work more closely with surgical teams. It was possible to **do more work in the departments**, e.g. for the screening of high-risk patient groups, for the decolonization of high-risk patients before treatment and the close monitoring of catheters. This has led to a **steady reduction in HAIs**.[6]

In summary, the *IPC Toolkit* can be used to generate more surveillance data with fewer human resources. This frees up resources for programs and projects.

These advantages are offset by the costs. A cost estimation for the *IPC Toolkit* is difficult. Costs depend on the hospitals IT infrastructure and the hospital size. The pricing model of most providers includes a fee for the implementation of the software, including the integration with various local systems, in particular clinical and laboratory information system and admin system, as well as an annual fee for the license. We have estimated the approximate cost of the software for hospitals. We consider these costs as acceptable against the benefits of the product.

Discussions with interested hospitals

We have discussed the project with several hospitals. Many of them showed great interest in potentially participating. They desire more detailed information regarding the software, its implementation, and potential benefits. In response to this demand, we have prepared a comprehensive document that provides further insights and addresses key questions. This document will serve as a basis for continued discussions and potential next steps (**Appendix 3 and 4**).

Funding of the project

We have evaluated the following funding options for the development of the *IPC Platform*:

- DigiSanté has no budget to fund the HAI Surveillance; however, thematically, the projects have some overlap. Therefore, we envision a close collaboration. DigiSanté, with its sub-project Nasure, aims to improve the system for monitoring notifiable diseases. We have planned a regular exchange of knowledge (**see chapter 6.3**).
- The Federal Chancellery (FCh, Bundeskanzlei) has a funding platform "Swiss data ecosystems". We have approached them for funding, but the scope and content of our project are not in their focus.
- The Swiss National Science Foundation does not support infrastructure projects.
- Innosuisse does not have a suitable funding instrument for the project.
- Swiss Quality Commission (Eidgenössische Qualitätskommission, EQK) is a funding body for quality improvement projects. We have applied for subsidies (**appendix 5**). The final decision is pending. The initial feedback is promising. We expect the decision at the beginning of March.
- ANQ is willing to contribute financially to the project once the main funding is secured.

Business model and maintenance

Securing long-term financing for the *IPC Platform* remains a challenge. The costs for the *IPC Toolkits* will be covered by the individual hospitals, as each institution is responsible for implementing and maintaining the software locally. In contrast, a sustainable funding solution is still needed for the national *IPC Datacenter* and the maintenance and adaptation of the entire *IPC Platform* to the ongoing evolution in the digital healthcare ecosystem.

Currently, the ANQ funds the Surgical Site Infection (SSI) Surveillance module. Contributions from the participating hospitals finance the other modules. This financing model should also be continued in the future in order to operate the *IPC Platform* in the long term but we have no certainty that the platform will be able to continue operating after the end of the project. If the revision of the Epidemics Act is adopted, financing may also be transferred to the federal government.

5.4 Discussion

The development of the *IPC Platform* can proceed if the EQK agrees to support the project. Without this support, the project is at risk, as no alternative funding source has been identified.

We believe that hospitals–particularly small and medium-sized ones–will benefit from the *IPC Toolkit* and are willing to invest in it. By optimizing resources, the *IPC Toolkit* enables hospitals to dedicate more time and

effort to infection prevention programs and projects. It also helps hospitals meet or exceed the Minimum Structural Requirements and achieve the operational goals of the NOSO Strategy.

However, ensuring the Platform's long-term maintenance presents challenges. While long-term maintenance ANQ will continue funding the SSI Surveillance module, there is uncertainty about how the remaining components will be financed over time.

Another critical issue is the integration of audits tools into the software, specifically the Swissnoso CCM observation instrument. If this instrument is incorporated, Swissnoso risks losing a key revenue stream. It is essential to carefully assess how software functionalities are integrated to prevent unintended financial consequences.

Ultimately, a strategic approach from the FOPH is needed to ensure the long-term sustainability of data collection. A well-defined plan is essential to secure stable funding and infrastructure, ensuring that the NOSO Strategy and Swiss acute care hospitals can continue benefiting from the platform.

6. Synergies with other projects

6.1 Aims

We sought to explore opportunities for future operational collaboration with various partners in the Swiss healthcare sector. This objective is particularly important given the ongoing rapid advancements in healthcare digitalization across Switzerland.

6.2 Procedure

During the preliminary project, we evaluated potential partners and have remained in regular contact ever since. We have organized workshops with some of them to facilitate an intensive exchange of ideas.

6.3 Results

Below is an overview of key institutions and projects most relevant to our project.

DigiSanté and Nasure

We have established a regular exchange with DigiSanté, particularly with Adrian Costea, who oversees the Digisanté IT architecture. His expertise in interoperability and system design helps ensure that the *IPC Platform* and its data remain compatible with federal systems.

DigiSanté is developing a data mesh architecture, and we are aligning our project to integrate seamlessly into this framework. We have presented our idea in this regard to the EQK (**see appendix 6**).

Nasure, a sub-project of DigiSanté, is developing a new system for the reporting of notifiable infectious diseases in Switzerland. While Nasure and the *IPC Platform* share thematic similarities, their focus remains distinct. In a workshop with the IT consulting company Eraneos, we identified synergies between the two projects and will remain in close contact to maximise mutual benefits.

Swiss Sepsis Program

The Swiss Sepsis Program is a national initiative launched in September 2023 to enhance awareness, detection, treatment, and prevention of sepsis in Switzerland. Led by the University Childrens Hospital Zurich, Insel Gruppe AG, and CHUV, the program is funded by the Swiss Quality Commission (EQK) until December 2028.

Their approach aligns with our vision for the *IPC Platform*, as they plan to deploy hospital-based software to support the early detection and management of sepsis. We see strong potential in a collaboration and intend to formalize this partnership in the near future. The Sepsis team has already provided a letter of support for our EQK application (**see appendix 7**).

ANRESIS

We maintain regular contact with Andreas Kronenberg from ANRESIS due to the significant thematic overlap. The *IPC Toolkit* includes functionalities that facilitate the management of resistant pathogens and offers optional antimicrobial stewardship modules. There is strong potential in data collection and analysis.

H+

We have engaged with Pascal Besson and Marianne Steimle from H+, who shown great interest in our project. To provide them with a clearer understanding of our approach, they participated in a demonstration session with one an IPC software provider.

Swiss Personalized Health Network (SPHN)

Our exchange with SPHN began during the preliminary project in 2023, initially focusing on technical aspects and interoperability. More recently, our discussions have expanded to legal considerations. SPHN has accumulated extensive expertise in legal frameworks over the past years and has offered advisory support in this area.

ANQ

Swissnoso conducts Surgical Site Infection (SSI) surveillance in partnership with the ANQ, which has a vested interest in reducing hospitals' administrative burden through automation and simplification. ANQ supports the digitalisation efforts, and we maintain regular contact to discuss the progress of the project and identify synergies.

6.4 Discussion

Collaboration and knowledge exchange with other initiatives and programs are essential to ensure efficiency, avoiding redundancies, and leveraging shared knowledge. Actively identifying and capitalizing on synergies–such as using existing infrastructures, methodologies, and expertise–helps prevent duplication of effort and maximizes impact.

Overlapping initiatives can also lead to resource misallocation and consternation among stakeholders.

One of the biggest challenged in collaboration is the misalignment of project timelines. Despite this, fostering partnerships and leveraging synergies remain critical to the success of these projects and the long-term sustainability of digital healthcare systems. We will continue expanding our network and strengthening cooperation where necessary.

7. Integration of existing and planned Swissnoso surveillance modules

7.1 Aims

Our objective was to plan and define how the Swissnoso modules can be effectively integrated into the *IPC Platform*.

7.2 Procedure

Through discussions with interested hospitals, Swissnoso module coordinators, software providers, the FOPH, and the EQK, we developed a strategic approach to integrating existing and upcoming Swissnoso modules into the *IPC Platform*.

7.3 Results

When planning the integration of the various modules, we were guided by the following inputs:

- Hospitals generally wish an early integration of SSI Surveillance. SSI Surveillance is associated with a high workload for the hospitals and simplification is urgently needed.
- The EQK is pushing for the development of the *IPC Datacenter* to be completed as soon as possible and for the earliest possible transfer to operational use. EQK can provide financial support for the development, but not for the operation of the *IPC Datacenter*. Swissnoso is therefore under pressure to migrate the existing SSI and CAUTI modules at an early stage to free up financial resources for the operation of the *IPC Datacenter*.
- The CLABSI and nvHAP modules are in the pilot phase. There is not yet a technical solution for the national rollout. It is, therefore, important for the modules to be integrated into the *IPC Platform* soon while maintaining the clinical and epidemiological governance by the experienced IPC team leaders.
- The integration of further modules and topics such as VAP, CCM and CH-PPS should be discussed medium term

Based on these ideas, we have developed an integration roadmap (**Figure 2:** Roadmap for establishing the *IPC Platform* and the integration of different Swissnoso modules.)

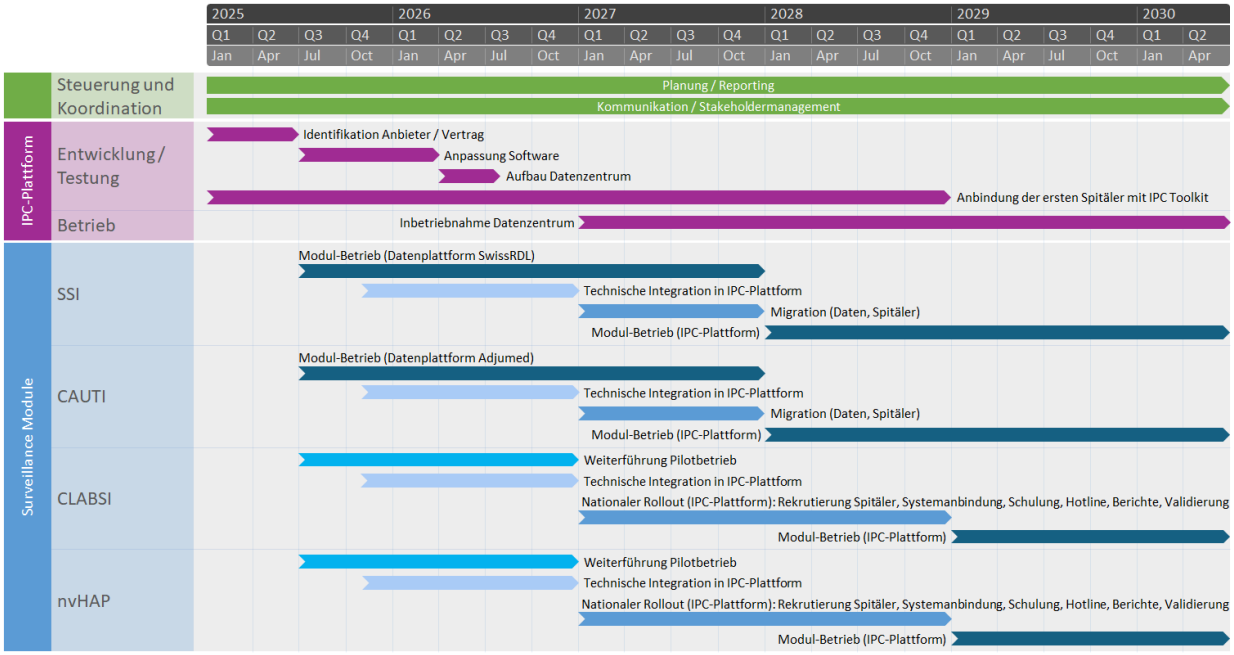

Figure 2: Roadmap for establishing the *IPC Platform* and the integration of different Swissnoso modules.

The integration of these modules is a key requirement outlined in our Request for Proposal. The exact timeline and implementation process will be determined in collaboration with the selected software provider, Swissnoso, the Swissnoso module coordinators, and the FOPH within the framework of the NOSO 2025-2030 mandate.

7.4 Discussion

Integrating of existing modules into the *IPC Platform* presents a complex challenge that requires careful consideration of technical, organizational, and logistical factors to ensure a seamless transition.

A top priority is the successful migration of existing solutions and data while simultaneously developing the *IPC Platform*. The Platform must not only preserve current capabilities but also improve efficiency, accuracy, and usability. To avoid inefficiencies, efforts must focus on eliminating redundancies and preventing parallel structures.

For participating hospitals, structured training programs will be essential to ensure that all users are well-prepared to work with the new system, minimizing disruptions to daily operations.

Most software providers currently lack a surveillance solution tailored to Switzerland. As a result, new features will need to be developed to meet national requirements. The adaption and integration of the existing Swissnoso modules into the *IPC Platform* will require significant engagement from the current module coordinators. Their expertise and coordination efforts will be essential to facilitate a smooth transition and alignment among all stakeholders. This change process must be actively supported by Swissnoso. Their leadership, commitment, and strategic oversight will be crucial for effective decision-making and successful implementation.

The rapid advancements in artificial intelligence (AI) are set to challenge any existing, planned, or improved IPC software solutions over the next few years. AI-driven automation, predictive analytics, and real-time decision support will likely redefine how infection prevention and surveillance systems operate. While this presents opportunities for enhanced efficiency and data-driven decision-making, it also raises concerns about integration, regulatory compliance, and the adaptability of existing platforms. The *IPC Platform* project must proactively address these developments by ensuring flexibility in system design, fostering AI-readiness, and maintaining close collaboration with emerging technological initiatives to stay at the forefront of innovation.

8. Clarification of the legal framework

8.1 Aims

Our goal was to clarify the legal framework governing the existing Swissnoso modules and the planned *IPC Platform*.

8.2 Procedure

During the preliminary project 2023, we compiled a document describing the various Swissnoso modules and the *IPC Platform* as a basis for legal clarification.

We sought a statement from the Federal Data Protection and Information Commissioner (FDPIC), but they saw themselves unable to respond, stating that the matter did not fall within their jurisdiction. The legal team at the FOPH provided the same response. As a result, Swissnoso decided to engage a private law firm for legal consultation.

8.3 Results

We appointed Julian Mausbach and Brigitte Tag from Vicimed to conduct a legal assessment. The existing Swissnoso modules and the planned *IPC Platform* are compliant with the law, provided that the relevant technical and organizational measures are implemented. A detailed report can be found in the **appendix 8**.

8.4 Discussion

Commissioning this legal assessment was a crucial step. Legal clarity is essential for both maintaining the existing modules and developing the new infrastructure. The timing of the assessment is particularly beneficial, as its findings can still be integrated into the planning phase of the *IPC Platform*.

The legal review helps us to optimize our processes and ensure compliance with data security and protection regulations. We will incorporate Vicimed's recommendations into our planning.

9. Discussion

The Swissnoso digitalization working group has continued to push the project forward, gaining valuable insights critical for the implementation phase. The **Request For Proposal** has been further refined to better align with hospital needs and technological advancements.

Strong interest from hospitals

Feedback to the newsletter and the presentation at the Joint Annual Meeting SSI / SSHH / SSTTM in Bern has confirmed strong interest from hospitals. This widespread engagement underscores the necessity and relevance of digital solutions in enhancing infection prevention and surveillance in Switzerland.

Challenges in coordination with other projects

Aligning with other projects remains challenging. While mutual interest exists, synchronizing timelines is not always feasible. Continuous exchange and collaboration are essential to capitalize on synergies wherever opportunities arise.

The challenge of the rapid evolution of AI

The rapid evolution of AI will challenge existing and future IPC software solutions, requiring the *IPC Platform* to remain adaptable, AI-ready, and closely aligned with emerging technological advancements to ensure long-term relevance and effectiveness.

FOPH's role in preventing redundant structures

The Federal Office of Public Health (FOPH) plays a crucial role in preventing duplications of efforts and the creation of redundant structures. Clearly defining project boundaries will be key to ensuring efficiency and optimizing resource allocation.

Need for common IT Standards

DigiSanté must take the lead in establishing shared IT standards to ensure interoperability across digital healthcare solutions. A unified approach will facilitate data exchange and improve system efficiency across institutions.

Governance and financial considerations

Clarifying the governance structure and long-term financial sustainability of the *IPC Platform* remains a priority. If funding from EQK is secured, it will be a significant success and a huge opportunity to enhance patient safety in Swiss acute care hospitals. Alternative financing options are inexistent.

Ensuring Long-Term Funding

Even with initial funding, the long-term financial sustainability of the *IPC Platform* remains uncertain for now. It is essential to establish a clear strategy for maintaining and evolving the infrastructure to ensure its lasting impact.

By proactively addressing these challenges and fostering collaboration among key stakeholders, the *IPC Platform* can achieve sustainable success and drive meaningful improvements in healthcare quality and efficiency.

10. Recommendations

Based on our investigations in this project, the Digitalisation Working Group and Swissnoso recommend for the successful creation and sustainment of the *IPC Platform*:

1. **Collaborating with a commercial provider:**
   Swissnoso partners with an experienced commercial provider to leverage their technical expertise, ensuring the *IPC Platform* is reliable, scalable, and aligned with industry best practices. The partnership includes a requirement to make the platform's semantic, structural, and workflow features publicly accessible, allowing other commercial and non-commercial providers to align their products to this national standard. Furthermore, it has to be AI-ready.
2. **Support from FOPH and Digisanté:**
   FOPH and DigiSanté provide tangible operational support to the Swissnoso project team to ensure that the *IPC Platform* fully aligns with DigiSanté's requirements and integrates seamlessly into the planned Digital Mesh architecture. This support includes facilitating expert consultations and providing detailed documentation on the expected technical and regulatory standards.
3. **Coordination with other FOPH and EQK projects:**
   FOPH and EQK support in aligning federally funded projects—such as Anresis, Nasure, and the Swiss Sepsis Program—to create a cohesive and sustainable digital framework for infectious disease risk management. Their engagement ensures strategic coordination, long-term integration, and operational efficiency across initiatives.
4. **Ensuring long-term sustainability:**
   FOPH supports Swissnoso in identifying funding and resources beyond the initial project phase to support the ongoing operation, maintenance, and evolution of the national *IPC Platform* as a core component of the NOSO Strategy.

11. Next steps

To accelerate project implementation and capitalize on the acquired knowledge and established network, we propose a seamless transition into the execution phase of the *IPC Platform,* as recommended to EQK:

1. **Secure funding:** Before Swissnoso can proceed with further investment in the *IPC Platform*, securing financial support is essential.
2. **Establishing a project organization:** Establishing a project team and a project organization for the efficient operation of the project and strategic decision making.
3. **Select a software provider:** We will invite selected companies to respond to our Request for Proposal (RFP) and initiate negotiations to finalize the provider selection.
4. **Onboard pilot hospitals:** Early identification and integration of pilot hospitals will allow for testing and refinement of the *IPC Platform* before its full-scale deployment.
5. **Align with the NOSO Mandate (2025-2030):** Ensuring alignment with the mandate "Expertise Entwicklung von Massnahmen zur Überwachung, Verhütung u. Bekämpfung von healthcare-assoziierten Infektionen 2025-2030"
6. **Integrate the feedback from the legal assessment:** Implementing necessary adjustments based on the legal expertise will ensure compliance and mitigate potential risks.

7. **Strengthen collaboration with other projects and define common goals:** Formalizing partnerships with related projects and establishing clear, shared objectives will foster synergies and prevent redundancies.

12. References

1. Swissnoso digital infection prevention platform (SwissnosoDIPP) 2023. https://www.aramis.admin.ch/Texte/?ProjectID=53357.
2. Über die strukturellen Mindestanforderungen. https://www.swissnoso.ch/forschung-entwicklung/strukturelle-mindestanforderungen-hai/ueber-die-strukturellen-mindestanforderungen.
3. Strategie NOSO: Spital- und Pflegeheiminfektionen, Bundesamt für Gesundheit. https://www.bag.admin.ch/bag/de/home/strategie-und-politik/nationale-gesundheitsstrategien/strategie-noso--spital--und-pflegeheiminfektionen.html.
4. Nault, V. *et al.* Sustained impact of a computer-assisted antimicrobial stewardship intervention on antimicrobial use and length of stay. *Journal of Antimicrobial Chemotherapy* **72**, 933–940 (2017).
5. Baudet, A. *et al.* Perceptions of infection control professionals toward electronic surveillance software supporting inpatient infections: A mixed methods study. *Int J Med Inform* **186**, 105419 (2024).
6. Hoyle, E. F. Using clinical surveillance software to support effective infection prevention and control for managing COVID-19. *Br J Nurs* **32**, 52–56 (2023).