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MANAGEMENT OF STABILIZATION OF IT PROJECTS IN THE HEALTHCARE SECTOR

Summary. *The article is devoted to means of stabilization of IT projects in the healthcare sector. The purpose of the study is to determine what prevents medical organizations from achieving sustainable effects from the implementation of software products. During the study, general scientific methods of cognition were used: analysis and synthesis, system approach, comparative analysis and structural-logical classification. According to the results of the study, it was found that after the technical launch, most organizations enter the phase of trial use of the system. During this period, a significant number of requests and clarifications accumulate that require elimination or refinement. This phase is the stabilization phase. Six factors that destroy the stability of IT projects in medicine were identified: the complexity of the system itself, problems with usability, staff overload with activities related to documentation, insufficient support from the implementation team, the lack of effective metrics of the current state of the system, as well as personnel risks associated with staff turnover during the adaptation period. It is significant that a significant part of these problems remains unnoticed by management as long*

as the staff copes with current duties. They become visible only when the load exceeds the team's adaptive resource. The practical significance of the study lies in the formation of mechanisms that allow accelerating the adaptation period and stabilizing IT projects of medical organizations undergoing automation or software updates.

Key words: *stabilization management, IT projects, healthcare, EHR, change management.*

Introduction. Healthcare organizations around the world are actively implementing digital solutions: electronic medical records, clinical decision support tools, telemedicine platforms. The market for medical information technologies is growing, and the volume of investments in the industry is increasing every year [4]. However, the success statistics of such projects remain disappointing: from 50 to 70% of EHR implementations do not achieve the planned results [8], and about 70% of pilot solutions in hospitals do not go into sustainable use [6]. The problem is often not whether the system was launched, but whether the organization was able to go through the difficult transition stage after this launch.

The classic project management model – deadlines, budget, scope – is poorly adapted to the realities of the healthcare environment. Clinical workflows are critical by nature, staff have a high level of autonomy and tend to form workarounds instead of adapting to new systems, and regulatory requirements significantly complicate any configuration changes after launch [12]. That is why a separate management concept has been formed in healthcare IT practice – stabilization management. It covers the activities between technical go-live and achieving operational maturity and determines whether the implemented system will turn into a real clinical tool [10].

Literature Review. The issue of IT project management in healthcare is not sufficiently comprehensively covered in the scientific literature as an

independent management category. Nevertheless, individual components of this topic are considered by scientists. In particular, the issue of general indicators of success and failure in EHR implementations was studied by such researchers as Anderson J., Beyer A. and Tate S. [2], as well as Anderson J. and Manzione L. [1]. The studies of these authors note that only 38% of organizations that have recently undergone large-scale EHR implementations reported that the result met their expectations, and the level of satisfaction of nurses with EHR support from organizations remains critically low.

As for the issue of EHR usability and its connection with clinical staff burnout, this issue is the subject of several independent studies. Among them, it is worth highlighting the work of Melnick E.R. et al. [13], which showed that EHRs fall into the bottom 9% of all evaluated technologies on the System Usability Scale; Lohmann-Lafrenz S. et al. [11], who recorded even lower SUS scores after the implementation of Epic in a Norwegian university hospital; and Olakotan O. et al. [14], whose review confirms the systemic nature of usability problems in clinical EHRs.

The topic of documentation burden and its relationship to burnout has been investigated by Henry T.A. [5] and Budd J. [3]. According to the study cited by Henry T.A., physicians spend more than 5 hours in the EHR for every 8 hours of scheduled time with patients; Budd J. confirms that excessive documentation burden in primary care is one of the leading factors of burnout.

The issue of practical implementation and stabilization of EHRs after go-live is reflected in case studies. Kiepek W. and Sengstack P.P. [10] analyzed the experience of Vanderbilt University Medical Center and showed that even well-prepared organizations face the need for additional support in the first days after launch. Johnson K.B., Sternberg P.Jr. and Dubree M. [7] in their analysis note that the Vanderbilt team prematurely called the stabilization phase optimization, in effect confusing survival after launch with achieved success. Siwicki B. [17] describes the Health First support model, which involved emeritus-level

physicians to provide "at-the-elbow" support during the transition to Epic. The problem of EHR optimization in a broader context is explored by Makhni S. et al. [12], as well as Restuccia M. [16], who, based on the experience of CIOs in large medical organizations, describes the practice of managing the backlog after launch. Tate S. [18] specifically examines the documentation workload of nurses and links it to reduction strategies through personalization and training. The issue of personnel and financial consequences of burnout and staff turnover is highlighted in the KLAS study presented by Pennic F. [15].

The financial dimension of ROI from digital investments is analyzed in the article by Kaltwasser J. [9] and the publication by Dyrda L. [4]. The general context of instability of IT projects in the healthcare sector, including the statistics of the Standish Group and the evaluations of pilot projects, is described in the publication Improvizations [6] and the materials of Topflight Apps by Kalinin K. [8].

Despite the wide coverage of individual aspects, a comprehensive approach to stabilization management as an independent phase of IT project management has not yet been formed in the scientific literature. The author of this study proposed his own systematization of destabilization factors and stabilization management tools in their interrelationships - this is the main contribution to the development of the topic. Analysis and synthesis, comparative analysis of practical cases, and structural-logical classification were used to process the material.

Problem Statement. The purpose of the article is to investigate stabilization management as a management category in healthcare IT projects and to systematize the means of its provision. To achieve the goal, the following tasks will be performed during the study: to reveal the content of the concept of stabilization management of IT projects in the healthcare sector; to analyze the factors of destabilization with a generalization of their evolution and

classification by type; to systematize the means of stabilization management with a definition of their sphere of influence and characteristics.

Methods and materials. The study is based on the processing of scientific publications, practical cases and analytical reports in the field of IT project management in healthcare. The methods of analysis and synthesis, comparative analysis and structural-logical classification were used. Comparative analysis was used to compare the experience of different organizations, classification – to organize the identified factors and means of stabilization.

Results and Discussions. Standard approaches to the evaluation of IT projects take into account three parameters: timing, budget and compliance with the technical task. In most industries, this is sufficient. However, the study by Restuccia M. notes that the medical IT sphere requires a fundamentally different logic of evaluation, since the formal launch of the system and the actual receipt of benefits from it are different events, separated in time by months [16]. This difference constitutes the content of the stabilization phase.

Stabilization management as a category of IT project management encompasses a set of management actions aimed at ensuring the stable and effective functioning of the implemented information system after technical launch. In the context of IT projects in the healthcare sector, this category acquires particular importance due to three key circumstances:

- clinical criticality of the environment – medical systems directly affect treatment processes, therefore any instability carries not only operational, but also safety risks for patients [14];
- behavioral complexity of system adoption – clinical staff tend to form workarounds instead of adapting to the new system, especially when it does not correspond to the real rhythm of work. According to Olakotan O. et al., it is usability problems that are the leading factor in such behavior [14];

- regulatory and integration burden – EHR systems must meet data security, interoperability, and documentation requirements, which makes any configuration changes after launch significantly more difficult [12].

The stabilization phase is a separate stage between go-live and full-fledged operational optimization. Johnson K.B., Sternberg P.Jr., and Dubree M., describing the experience of Vanderbilt University Medical Center, recorded a revealing situation: the team publicly declared the stabilization phase complete and renamed it optimization, but in reality the organization was still in survival mode after launch [7]. This is not an isolated case—it is a typical management error that leads to premature reduction of resources precisely when they are needed most.

In the operational dimension, stabilization management encompasses monitoring the clinical performance of the system, responding to critical issues, managing the backlog of user requests, training, and personalization. Makhni S. et al. emphasize that a few weeks of training without further support is fundamentally insufficient for complex medical platforms [12]. Stabilization management is a condition for the technology not to simply "stand" in the organization, but to actually support its clinical work.

Understanding what undermines the stability of IT projects is no less important than knowing the means of restoring it. The factors of destabilization in the medical IT sphere have changed significantly over time. At the initial stage of hospital computerization, in the 1980s and 1990s, projects failed mainly due to technical reasons: unreliable equipment, lack of integration standards, lack of specialists. It was believed that a properly configured system would work by itself [6]. In the 2000s and 2010s, along with the spread of large EHR platforms, technical reliability increased - but organizational risks came to the fore. Staff resistance, the gap between designed and real workflows, insufficient involvement of clinicians in system design became the main reasons for failures. Today, according to Improvizations, from 50 to 70% of EHR projects do not

achieve the planned results [6], and Kalinin K. notes that about 70% of pilot technological solutions in hospitals do not go into permanent use at all [8]. The leading destabilizers are currently usability, documentation load and personnel instability.

The systematization of current means of destabilization and their characteristics are presented in Table 1 (see Table 1).

Table 1

Means of destabilization of IT projects in the healthcare sector

Destabilizing factor	Characteristics and manifestations
Structural complexity of EHR systems [2]	EHR platforms serve dozens of staff categories simultaneously: physicians, nurses, pharmacists, administrators, laboratory specialists, and billing services. Each of these groups has different system configuration needs, which complicates even the most carefully designed rollout process. According to KLAS Research, only 38% of organizations that had recently completed a large-scale EHR implementation reported that the outcome met their initial expectations [2].
Low usability [13; 11]	The average SUS score for EHRs among physicians in the United States is 45.9/100, placing it in the bottom 9% of all technologies [13]. After Epic was implemented in one Norwegian university hospital, the median score fell to 25/100, and among physicians, to 15/100 [11].
Excessive documentation burden [5; 13]	For every 8 hours of scheduled patient appointments, physicians spend more than 5 hours in the EHR [5]. In addition, each hour of direct patient contact is accompanied by one to two hours of system-related work, some of which is performed outside working hours. When template and alert configurations are not reviewed after launch, these time costs become fixed as a permanent norm [13].
Insufficient post-launch support [16; 10]	After go-live, project teams are usually reduced, while managerial attention shifts to new initiatives. As a result, the accumulated backlog remains without dedicated personnel. The experience of Vanderbilt University Medical Center showed that, even with thorough preparation, the command center had to be expanded and additional staff had to be brought in on the second day after launch [10].
Weak operational metrics [9; 1]	Technical indicators, such as uptime and interface stability, are present in most organizations. Documentation time, the number of workarounds, and the level of engagement with system functions are measured much less often. A survey by Ernst & Young found that 70% of healthcare executives had not yet seen ROI from digital investments, with half of them linking this to fragmented metrics [9]. KLAS further notes that 46% of nurses disagree that their organization provides good EHR support [1].
Financial and workforce vulnerability [15]	Burnout is rarely cited as the sole reason for resignation, but it is a documented contributing factor. In 2024, nearly half of the nurses and physicians surveyed by KLAS said they were likely to leave their organization within two years, while the actual turnover rate among the at-risk group was 21% and 13%,

	respectively. Replacing one nurse costs approximately USD 56,300, while replacing one physician costs between USD 500,000 and USD 1,000,000 [15].

Source: compiled by the author based on sources [1; 2; 3; 5; 6; 8; 9; 10; 11; 13; 15; 16]

As can be seen from Table 1, the means of destabilization cover both the system-technical and human-centric dimensions. Their common feature is that they mostly manifest themselves after the formal completion of the project and at the same time remain hidden from management. This situation confirms that destabilization is primarily a managerial, not a technical problem.

The response to the above destabilization factors is a set of management tools aimed at ensuring the operational stability of the system after launch. The principle is that these tools are not exclusively technical – they cover the organizational, human-centric and analytical dimensions of management.

The key principle of stabilization management is to change the criterion of success. According to Kiepek W. and Sengstack P.P., success is determined not by the fact of technical launch, but by the level of sustainable acceptance of the system and the actual operational result [10]. This means that stabilization requires a separately planned phase with its own resources and metrics. According to Anderson J. and Manzione L., nurses who personalized their EHR have 45 points higher satisfaction compared to those who did not [1]. Even a relatively simple means of personalizing the system can significantly affect the level of operational stability.

Stabilization management tools are systematized in Table 2, taking into account the scope of their influence and practical content (see Table 2).

Table 2

Stabilization management tools for IT projects in healthcare

Stabilization tool	Area of impact	Description
Formal planning of the stabilization phase [10; 7]	Project management	Stabilization is defined as a separate planned phase with resources, responsible teams, timelines, and success criteria. It does not replace the optimization phase but precedes it.

Maintaining support after technical go-live [12; 14]	Resource provision	The project team and managerial attention are maintained after go-live. The complexity of EHR systems increases the need for sustained support rather than reducing it.
Rapid-response team for critical issues [10]	Operational safety	A pre-established interdisciplinary rapid-response team is created to resolve critical issues related to safety, throughput, and clinical workflow.
At-the-elbow support [17]	User adoption	Physician champions and IT consultants are engaged directly at the workplace. Health First involved more than 50 support physicians, including emeritus-level physicians.
Prioritization of issues by criticality [17]	Backlog management	Issues are classified as patient-safety critical, throughput critical, and optimization-related. This prevents requests from accumulating chaotically.
Systematic handling of the optimization backlog [16]	System configuration	A formal mechanism is introduced for collecting, prioritizing, and addressing deferred requests related to templates, alerts, data entry sequences, and workflows.
Introduction of operational health metrics [9; 1; 18]	Monitoring and analytics	Documentation time, the prevalence of workarounds, feature use, satisfaction, and workload dynamics are measured instead of relying only on technical indicators.
EHR personalization and post-launch training [1]	User experience	Nurses who personalized the EHR reported satisfaction scores 45 points higher. Stabilization includes support in configuring the system around real workflows.
Optimization of the documentation burden [12; 3]	Clinical efficiency	Templates are reviewed, excessive alerts are reduced, and the EHR is adapted to clinical needs. A significant share of time loss is caused by configuration rather than regulatory requirements alone.
Early change management [10; 7]	Organizational culture	Communication, training, resistance management, and clinician engagement begin before launch and continue afterward. Change management is a building block of stabilization.

Source: compiled by the author based on sources [1; 3; 7; 9; 10; 12; 14; 16; 17; 18]

As can be seen from Table 2, stabilization management tools cover different levels of management: from strategic (planning the stabilization phase, change management) to operational (rapid-response team, triage of problems, at-the-elbow support) and analytical (operational health metrics, backlog monitoring). Makhni S. et al. separately emphasize: measurement in the stabilization phase should not create a culture of surveillance. The question should not be "which clinicians are using the system incorrectly", but "where is

the system failing the clinicians" [12]. Such a principle is important for maintaining staff trust and creating an environment in which feedback becomes a resource, not a source of anxiety.

Conclusions. In the medical IT sphere, the technical launch of a system and the moment when it actually starts working for all its users are separated by a time interval. It is this interval that determines the stability of the system and its practical value. It is technically incorrect to assess the implementation only by the fact of implementation.

Destabilization occurs from several sides at once. Different users have different levels of digital literacy, different experience with previous systems, and different rates of adaptation to new tools. Usability does not appear at the moment of launch - it is formed gradually, along with the acquired skills and habits of working in a new environment. Over time, the number of support requests naturally decreases, but by this point a specific list of requests from users has accumulated – things that interfere, do not work as expected, or need to be adjusted to real needs.

This list becomes the basis of stabilization management. A separate implementation phase is allocated for it with specific tasks: sorting problems by level of criticality, their sequential processing, introducing new metrics, personalized settings for key user groups, optimizing the documentation load. The implementation of these measures allows to significantly increase the satisfaction of using the system – and this is the basis of stabilization management.

References

1. Anderson, J., & Manzione, L. (2024, August 20). KLAS Arch Collaborative nursing guidebook 2024: Nursing EHR success. KLAS Research. https://klasresearch.com/archcollaborative/report/klas-arch-collaborative-nursing-guidebook-2024/573

2. Anderson, J., Beyer, A., & Tate, S. (2025, January 10). EHR implementations 2025: Investing in people to avoid pitfalls & ensure clinician success. KLAS Research. https://klasresearch.com/archcollaborative/report/ehr-implementations-2025/628

3. Budd, J. (2023). Burnout related to electronic health record use in primary care. Journal of Primary Care & Community Health, 14, 21501319231166921. https://doi.org/10.1177/21501319231166921

4. Dyrda, L. (2026, April 1). 10 trends in healthcare tech investments and ROI. Becker's Hospital Review. https://www.beckershospitalreview.com/healthcare-information-technology/10-trends-in-healthcare-tech-investments-and-roi/

5. Henry, T. A. (2024, October 7). Digging into the data to cut EHR burdens that drive burnout. American Medical Association. https://www.ama-assn.org/practice-management/digital-health/digging-data-cut-ehr-burdens-drive-burnout

6. Improvizations. (2025). 70% of healthcare IT projects still crash & burn — how to make yours an exception. https://blog.improvizations.com/consulting-projects-can-go-well-it-takes-better-process

7. Johnson, K. B., Sternberg, P., Jr., & Dubree, M. (2018). An EPIC switch: Observations and opportunities after go-live. Journal of Medical Systems, 42, Article 174. https://doi.org/10.1007/s10916-018-1023-5

8. Kalinin, K. (2025, November 7). EHR implementation: 11-step plan, strategies, Topflight's experience. Topflight Apps. https://topflightapps.com/ideas/ehr-implementation/

9. Kaltwasser, J. (2024, April 5). Investment in digital health? Definitely. ROI? Maybe. Managed Healthcare Executive, 34. https://www.managedhealthcareexecutive.com/view/investment-in-digital-health-definitely-roi-maybe-

10. Kiepek, W., & Sengstack, P. P. (2019). An evaluation of system end-user support during implementation of an electronic health record using the model for improvement framework. Applied Clinical Informatics, 10(5), 964–971. https://doi.org/10.1055/s-0039-3402450

11. Lohmann-Lafrenz, S., Gismervik, S. O., Ose, S. O., Aasdahl, L., Lauritzen, H. B., Faxvaag, A., Bardal, E. M., & Skarpsno, E. S. (2025). Usability of an electronic health record 6 months post go-live and its association with burnout, insomnia and turnover intention: A cross-sectional study in a hospital setting. BMJ Health & Care Informatics, 32(1), Article e101200. https://doi.org/10.1136/bmjhci-2024-101200

12. Makhni, S., Cerrato, P., Rico, J., Niazi, S., O'Horo, J., Peters, S., Shah, V., & Halamka, J. (2026). Meeting the challenges of electronic health record (EHR) optimization. npj Digital Medicine, 9, Article 8. https://doi.org/10.1038/s41746-025-02178-w

13. Melnick, E. R., Dyrbye, L. N., Sinsky, C. A., Trockel, M., West, C. P., Nedelec, L., Tutty, M. A., & Shanafelt, T. D. (2020). The association between perceived electronic health record usability and professional burnout among US physicians. Mayo Clinic Proceedings, 95(3), 476–487. https://doi.org/10.1016/j.mayocp.2019.09.024

14. Olakotan, O., Samuriwo, R., Ismaila, H., & Atiku, S. O. (2025). Usability challenges in electronic health records: Impact on documentation burden and clinical workflow: A scoping review. Journal of Evaluation in Clinical Practice, 31(4), Article e70189. https://doi.org/10.1111/jep.70189

15. Pennic, F. (2024, December 6). KLAS: The high cost of clinician turnover in 2024. HIT Consultant. https://hitconsultant.net/2024/12/06/klas-report-the-high-cost-of-clinician-turnover-in-2024/

16. Restuccia, M. (2017, November 15). A CIO's journey to EHR success and stability. Healthcare IT News. https://www.healthcareitnews.com/blog/cios-journey-ehr-success-and-stability

17. Siwicki, B. (2026, February 19). Health First turns to Epic emeritus docs to streamline EHR go-live. Healthcare IT News. https://www.healthcareitnews.com/news/health-first-turns-epic-emeritus-docs-streamline-ehr-go-live

18. Tate, S. (2025, December 16). Reducing nursing documentation burden 2025: Addressing a critical pain point for the largest clinical profession. KLAS Research. https://klasresearch.com/archcollaborative/report/reducing-nursing-documentation-burden-2025/706