



The Riksbank's e-krona project

Action plan for 2018

December 2017

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1. Introduction

This action plan has been produced within the framework for the Riksbank's e-krona project and covers the second stage of the project, phase 2, which covers 2018¹. This project started in March 2017, to investigate without preconceptions the possibility of issuing a general electronic means of payment, an e-krona, as a complement to cash. However, the Riksbank has not yet taken a decision on whether to issue an e-krona and the aim is not for an e-krona to replace cash.

One reason why the Riksbank wants to investigate the possibility of introducing an e-krona is that the use of cash in Sweden has been declining steadily over a long period of time. At the same time, the Riksbank has the statutory task of providing Sweden with banknotes and coins, households are using cash less and less and the private sector is reducing the general public's access to, and the usability of, notes and coins. This means that ultimately, private agents may determine the access to central bank money and payment methods. In addition to the Riksbank's obligation to supply cash, the starting point for this project is the Riksbank's task of maintaining price stability and promoting a safe and efficient payment system in a new digital environment.

In September 2017, the project published an interim report² with a conceptual proposal as to how an e-krona might look and after that the Riksbank initiated a dialogue with various actors in society to discuss the concept produced³. This dialogue will continue during phase 2 of the project on the basis of the project's priorities and with reference to the agents' wishes. The project proposes that the e-krona project further develops this conceptual proposal for an e-krona during 2018. The project work should take into account the dialogue held with external parties, the questions identified in the interim report 1 and the timetable stated in the project plan from March 2017.

The changes in the payment market are of such a nature that the Riksbank will need to follow developments and work with related issues for several years to come. The Riksbank is investigating the possibility to introduce an e-krona in relation to alternative methods of resolving the problems that can arise on the future payment market.

As the technological developments in the payment field are so extensive and it is difficult to gain an overview of which alternatives and possibilities are available for an e-krona just a few years ahead, the project assesses that it is appropriate to make regular decisions on the scope and aims of the project along the way. It is proposed that this assessment will be made annually in connection with the ordinary business plan and budget work. This action plan and budget are thus part of the Riksbank's business plan and budget for 2018.

Purpose of the project in phase 2

The purpose of the project is, using the e-krona concept described in interim report 1 as a basis, to analyse the Riksbank's possibilities to issue a general digital means of payment, produce concrete proposals regarding which qualities an e-krona should have, what infrastructure is appropriate, what legal issues must be dealt with for the Riksbank's mandate to issue an e-krona to be clear and to review the proposals regarding suitable technology.

Objective of the project in phase 2

The objective of the project is to draw up a proposal for a concrete concept for an e-krona to enable the Executive Board to make a decision on whether or not to issue an e-krona, if they so wish. Moreover, the project has the objective of drawing up proposals for appropriate amendments to the legislation prior to an introduction of an e-krona.

¹ See timetable in the project plan, March 2017.

² The Riksbank's e-krona project interim report 1 September 2017.

³ See the report from the autumn dialogues on the e-krona.

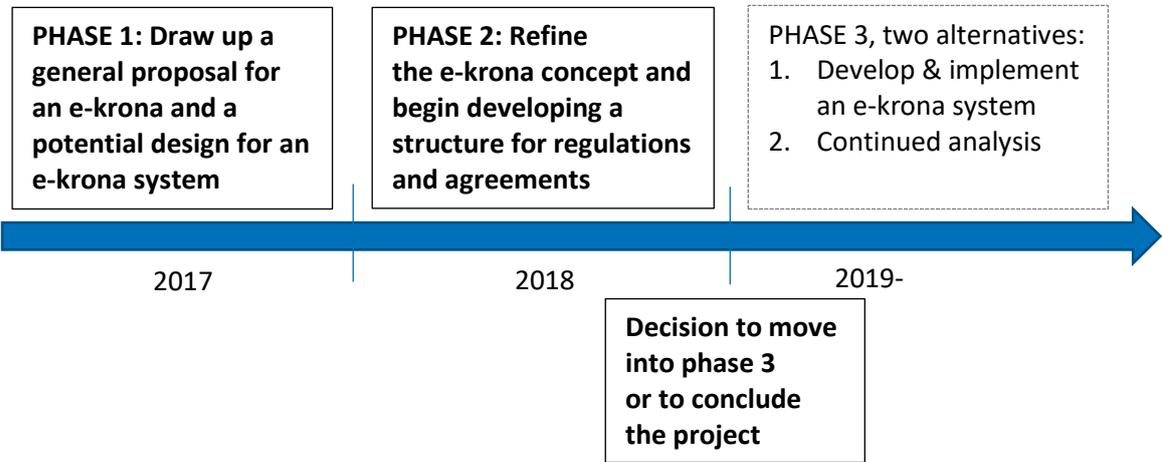
This action plan, for phase 2, describes the different phases of the project, the premises and the sub-projects during phase 2, risk management, resource needs and project management.

2. Project work

2.1 The phases of the project

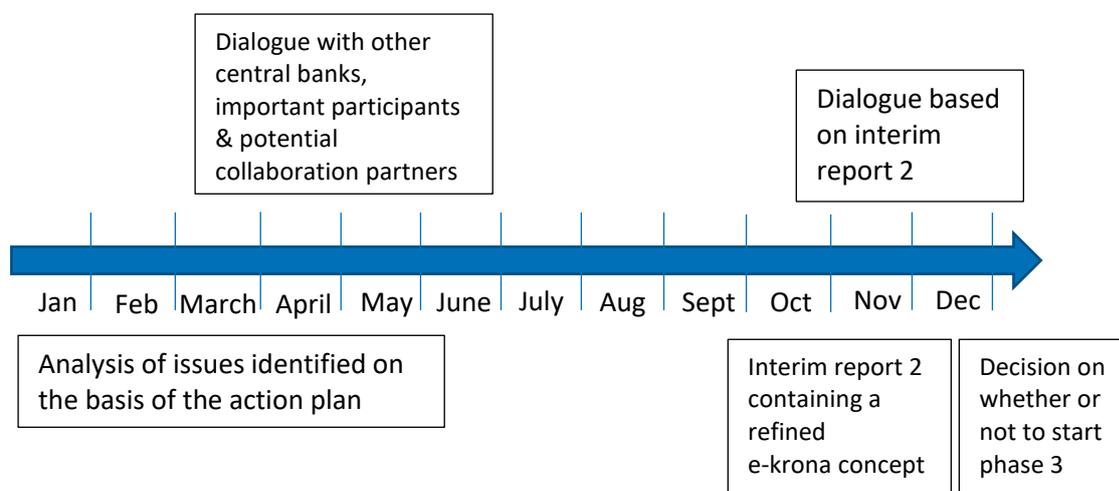
During phase 2 (see Figure 1), the project will be put in more concrete form and develop the e-krona concept produced in phase 1. In this step, proposals will also be drawn up for a governance and management model for the e-krona system, and proposals regarding other legal issues, such as regulations and agreements, will be designed and processed. Moreover, a proposal will be produced as to whether and if so, how, the Sveriges Riksbank Act requires amendment with regard to the proposed e-krona. Furthermore, a plan for a possible introduction of an e-krona will be drawn up to create a better picture of the way in which a potential e-krona should be implemented into society and which steps should be taken in the future project work. On the basis of the work done during phase 2, 2018, the Executive Board will decide on whether the Riksbank shall begin phase 3 or conclude the e-krona project and process the question of digital central bank currencies within the framework of its normal operations. Phase 3 can then either be a development and implementation phase of a chosen e-krona model, where the infrastructure for the e-krona system as a whole takes shape. Or, the Executive Board may decide that further analysis is required, and phase 3 will then mean that the project continues to investigate outstanding issues.

Figure 1. The various phases of the project



This project plan describes phase 2 of the project, see Figure 2 below for a general timetable for 2018. During the first half of the year, most of the analysis of the outstanding issues that have been identified will be carried out. Moreover, a continuing dialogue will be held with the focus on important participants and potential collaboration partners as well as other central banks working on similar issues. The aim is to publish an interim report by October 2018, based on the analysis work during the spring.

Figure 2. Phase 2, overall timetable for 2018



2.2 Premises for the project work during phase 2

The premises for the work in phase 2 shall first and foremost be based on the conclusions drawn during phase 1 of the project, that the introduction of a digital means of payment issued by the Riksbank, an e-krona, can counteract some of the problems that might arise on the future payment market. If the e-krona offers an alternative platform or infrastructure, it can also function independently of the commercial, bank-owned infrastructure and thus contribute to the payment systems being better able to withstand technological disruptions and situations of financial unease. The e-krona can also contribute to increased efficiency by making it easier for new participants to become established and by supplying the general public with payment services based on the e-krona. The Riksbank's role is to have a holistic approach to the functioning of the payment market that individual market participants can be expected to lack, for natural reasons. The investment that the Riksbank might then make in an e-krona must therefore be based on a long-term and strategic goal, not a short-term cost-benefit analysis.

The bases for the sub-project work in 2018 shall be:

- The e-krona is not intended to replace cash or other payment solutions, but is meant to function as a complement.
- The e-krona aims to safeguard the general public's access to central bank money in a situation where cash is no longer regarded as generally accepted.
- An e-krona would function as a means of payment and like cash can be used as a means of saving.
- An e-krona is intended for payments between consumers, companies and authorities. It is not *intended* for large payments that go through RIX⁴ and nor is it primarily a monetary policy instrument.
- An e-krona shall be a direct claim on the Riksbank, specified in Swedish kronor and can be held by financial institutions, companies, public authorities and members of the general public. The

⁴ The Riksbank's RTGS system for large-value payments between financial institutions.

Riksbank will supply accounts for e-krona. The e-krona shall be electronically accessible 24 hours a day, seven days a week, 365 days a year in real time.

- The supply of e-krona shall be determined by demand for them.
- An e-krona shall enable off-line payments of small amounts.
- The e-krona will not carry interest, but should have an inbuilt function that technically enables interest.
- The Riksbank will be responsible for the issue, redemption and settlement of the e-krona. The interaction with users of the e-krona will be entirely or partly through private or public sector agents with authorisation to mediate payments.
- A proposal will be presented whereby the e-krona can have a function that under certain circumstances, in accordance with the anti-money laundering regulations, allows partly anonymous payments.
- The technical solution produced for an e-krona must be flexible so that the solutions can be adapted to new technology developed over time. It must also be possible to amend its functions and characteristics over time.
- The economic effects of an e-krona in the medium and long term shall be analysed.

2.3 Sub-projects in phase 2, 2018

The project work shall be conducted in three sub-projects; infrastructure and technology, legal issues and policy issues.

The sub-project *infrastructure and technology* will produce a concrete proposal for a value-based e-krona and a more conceptual proposal for a register-based e-krona system.

The sub-project *legal issues* will continue to investigate the legal conditions for an e-krona and produce a concrete proposal as to which amendments are required on the basis of the e-krona concept produced during phase 1. This sub-project will also, with the aid of the other sub-projects, begin designing an overall governance and management model for an e-krona system.

The sub-project *policy issues* will investigate issues identified in the areas of monetary policy, financial stability and the functioning of the payment market.

The sub-projects' work will be carried out within the scope of the premises described in section 2.2. The sub-projects will in their work have extensive dialogues with external parties, such as financial companies, public authorities and payment service providers.

2.4 Risk management in the project

The main project is responsible for the overall, collective risk outlook for the project. Risk management is an important part of all of the sub-projects and phases of the project. In phase 2 of the project, we primarily see risks such as shortages of skills and resources. The main project will conduct a project risk analysis in spring 2018 and also draw up a list of risks for the general and overall risks in the project. Risks that it may be relevant to monitor include risks of poor governance, lack of clarity in communication, lack of competence, cost increases and delays.

The leaders of the sub-projects are responsible for appropriate risk management within their sub-projects and for analysing and assessing risks in the proposed measures. Risk assessment, vulnerability and security issues are highly important overall, both in the project and in the analysis of the various issues identified.

2.5 Overall resource requirements for the project

The overall resource requirements for the project in 2018 are calculated to be around 10 full-time posts divided across all of the departments at the bank with the exception of internal auditing. Costs for consultancy services will arise, with regard to expertise on legal issues, technology and infrastructure. These costs are calculated to amount to a maximum of SEK 3 million. In addition, there are other administrative costs, such as travel, meetings and conferences, amounting to around SEK 500,000.

2.6 Project organisation

The project organisation consists of a steering group, a project leader, a project group and reference groups. Participants in each group, their role and governance are described below. The project organisation may change over time.

Steering group

Chair: Cecilia Skingsley

Steering group participants: Martin W Johansson, Gabriela Guibourg and Marianne Olsson

Project manager: Eva Julin

Project coordination: Frida Erlandsson

The steering group's role is to:

- The chair takes decisions in the project.
- Decide on the prioritisation of the project's resources.
- Follow up the project's results and, if necessary, decide on reprioritisation.
- Follow up the project's risks and, if necessary, decide on measures.
- Take ultimate responsibility to the Executive Board for the project.

Project manager

The project manager's role is to:

- Push the project forward.
- Compile background data for the steering group.
- Propose prioritisation of the project's resources to the steering group.
- Follow up and provide information for the steering group on the project's results and, when necessary, propose reprioritisation.
- Follow up and provide information for the steering group on the project's risks and, when necessary, propose measures.
- Inform the Executive Board and the General Council of the project's development after checking with the steering group.

Project group

The project group consists of project manager Eva Julin and sub-project managers Mats Wallinder, Monika Johansson and Björn Segendorf. Ann Landelius is responsible for IT issues within the sub-project infrastructure and technology.

Experts within the project include Roger Broman, Jan Möller, Lars Marcus, Kristian Sörbom, Mats Forsberg, Claudio Tobar, Per-Anders Johansson, Paola Boel, Marianne Nessén, Carl Andreas Claussen, Reimo Juks, Gabriel Söderberg, Peter Sellin, Jan Schüllerqvist, Emil Brodin, Frida Erlandsson, Ian Vitek, Anna Wilbe and Daniel Wallemo.

The participants in the project group are appointed by the departments and may change over time.

The project group's role is to:

- Push forward the included sub-projects under the responsibility of the sub-project leaders and make status reports to the project leader.
- Conduct mutual reconciliation so that all sub-projects are well coordinated.
- Follow up and provide information for the project leader on the project's risks and, when necessary, propose measures.
- Inform the steering group and Executive Board on each sub-project's progress when the project leader has not done so.

Reference groups

The Riksbank's steering group and payments committee are the reference groups for the project.

Project management

The project group holds weekly meetings to check the status of the various sub-projects and inform each other of current activities, external contacts, resource use, delivery capacity and target fulfilment. The experts meet the project group regularly.

The project leader holds regular bilateral meetings with the sub-project leaders for status updates.

The steering group and the reference groups meet when necessary.

The steering group decides on proposals for action plans and budgets for the project, to be subjected to the Executive Board within the annual budget work process in the Riksbank. The Executive Board and General Council are regularly informed of the project's work.