**AAL Programme**

**Template for Part B for Collaborative Projects proposals submitted to the**

**Call for Proposals AAL-2020**

Date: 15.01.2020 Version: 1

**Please note**:

* This template **must** be used to write the proposal for submission to the call 2020 of the AAL-Programme. Please check our [website](http://www.aal-europe.eu/get-involved/calls/) for the latest version of this document.
* The maximum page length of the proposal description is set at **30 pages** including all elements. Font type Arial should be used, with minimum font size 10, line-spacing at least 1.0 and all margins on A4 sized pages at least 1.2 cm. Failure to comply with these guidelines may result in the proposal being classified as "non-eligible" *before* the evaluation by experts. Describe an issue only once and refer to that description - if needed. All explanatory text – like this page - can be deleted before submission. **Paragraph headings should be retained**. Try to highlight important information within the text, use pictures and diagrams to explain complex issues and make sure all such figures are readable. The electronic submission tool will automatically block the sending of any proposal exceeding 30 pages and not respecting the naming convention: **Application Form Part B**, the said proposal will thus not be included in the evaluation. Proposal descriptions of less than 15 pages are subject to a decision by the AALA Central Management Unit (CMU) on their inclusion in the evaluation process. Please note that Letters of Intent are to be uploaded separately in the Part B, respecting the naming convention: **Letter of Intent.** Failure to do so will lead to the automatic blocking of your proposal.
* It is recommended to study the full Call text (including the Guide for Applicants and National Eligibility Criteria document to be found <http://www.aal-europe.eu/stay-up-to-date/calls/call-2020/> and the template structure **before starting to write the proposal** to avoid redundancies and misplaced information. The following aspects should be prominent in all proposals: **end-user-involvement and user challenges met, innovation and market approach**.
* The three sections of this template are:
* Section 1: “Relevance and scope”,
* Section 2: “Implementation” how the concepts and goals will be materialised
* and Section 3: “Impact” of planned solution” on: a) quality of life of end-users and on service models, and b) market development and business.
* The above-mentioned sections of this template correspond to the evaluation criteria (Guide for Applicants Section 6.2.) as follows: Section 1 (Relevance and scope) includes the evaluation criteria: Proposal fit to the Call, Unique features relative to existing solutions, European dimension , Section 2 (Implementation) includes the evaluation criteria: Quality of the Proposed Solution and the Workplan and Quality of the Consortium and Project Management, Section 3 (Impact) includes the evaluation criteria: Potential Impact of the Proposed Solution on Quality of Life of end-users and Potential Impact of Proposed Solution on Market Development. Please note that Section 1 also includes a paragraph for (self-reported) key performance indicators of the project - this will be used in the review process of projects that obtain co-funding.
* **For each section, the Call text and relevant sections of the Guide for Applicants should be taken into account.**
* **Indicated section titles must be used**. A proposal that does not use the indicated headings will be considered as “not eligible” (decision by the AALA CMU).
* Within each section, proposers are free to follow the page length recommendations as long as the total is 30 pages maximum. The following recommendation would make sure that the proposal stays within 30 pages:

Cover/Title/Content/Executive Summary: 3 pages,

Section 1: 5 pages,

Section 2: 15 pages (incl. short descriptions of partner organisations and all work package lists),

Section 3: 7 pages.

* Excluded from the page count are documents that may be asked for in addition by AAL funding organisations. Such (rare) requests will be clearly indicated within the proposal submission system through which the proposal is uploaded.
* In Part B, only contact details of the project coordinator shall be given. Contact details of representatives of the remaining partner organisations shall be provided in Part A.
* “Placeholder” organisations (i.e. not identified at the time of submission) are not allowed at any time within the AAL proposal process. The inclusion of placeholder organisations will lead to the exclusion of the proposal from the evaluation process.

In case of questions, please contact the AAL CMU at [call@aal-europe.eu](mailto:call@aal-europe.eu).

**Template for proposal description (Part B, Call 2020)**

# Cover Page

**Application areas addressed:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Proposal full title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Proposal acronym: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of the project coordinator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contact details of the coordinator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project duration: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Envisaged starting date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Similar previously submitted or ongoing projects funded by AAL or other[[1]](#footnote-1) (add one line per project):

* ---------------------------------------------------------

Market targeted by the solution:

* private consumer market

(*with a clearly described route to market and an identified leader for commercialisation. This could be SMEs, large industry, or end-users’ organisations, acting as business partner*)

* Institutionalised market

List of participants:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Participant no\*** | **Participant organisation name** | **Participant short name** | **Organisation type**  *\* \* please choose among:* *END-USER - BUSINESS - SMALL MEDIUM ENTERPRISE - LARGE ENTERPRISE -RESEARCH - UNIVERSITY - OTHER* | **Role in the project**  *\* \* \* please choose among: USER - BUSINESS - RESEARCH* | **Country** |
| 1 (Coordinator) |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| … |  |  |  |  |  |

*\* Please use this numbering in all parts of your proposal.*

*\*\* Only one type and one role can be selected per partner. Should there be more than one type or role mentioned in the table, only the first one will be considered.*

*\*\*\** *Organizations which label themselves as end user organizations must fit into the definition as provided by the AAL Association of primary, secondary and tertiary end users (see the Call Text). This has to be reflected in the description of the partner, in the work plan and in the dissemination activities.*

**Table of Contents**

[Cover Page 3](#_Toc31374190)

[Section 1: Relevance and scope 6](#_Toc31374191)

[1.1 Example scenario 6](#_Toc31374192)

[1.2 Essence and uniqueness of project 6](#_Toc31374193)

[1.3 Comparative Advantage / Innovation 6](#_Toc31374194)

[1.4 Key Performance Indicators 6](#_Toc31374195)

[Section 2: Implementation 7](#_Toc31374196)

[2.1 Involvement of end-users (all levels) 7](#_Toc31374197)

[2.2 Business development plan 7](#_Toc31374198)

[2.3 Technology, standards and interoperability 7](#_Toc31374199)

[2.4 Project organisation, consortium composition and quality, work plan 7](#_Toc31374200)

[2.5 Resources required for successful implementation 8](#_Toc31374201)

[2.6 Risk assessment and management plan 8](#_Toc31374202)

[Section 3: Impact 10](#_Toc31374203)

[3.1. Impact on end-users 10](#_Toc31374204)

[3.1.1 Improving Quality of Life for primary and secondary end-users 10](#_Toc31374205)

[3.1.2 Effect on service models 10](#_Toc31374206)

[3.1.3 Social and ethical impact 10](#_Toc31374207)

[3.1.4 Opt-out, exit strategies and drop-out management 10](#_Toc31374208)

[3.2 Impact on market development 10](#_Toc31374209)

[3.2.1 Business components 10](#_Toc31374210)

[3.2.2 Sharing of project knowledge - dissemination 11](#_Toc31374211)

[3.2.3 Intellectual Property Rights management (IPR) and other legal issues 11](#_Toc31374212)

**Executive Summary**

The summary shall describe how the proposal will involve and meet the challenges of relevant groups of end users, the route to market and unique selling proposition of the planned solution, the commercialisation leader, the dissemination and target groups. The information should be provided in table format using the table below. The Executive Summary should be maximum 1 page in total.

|  |  |
| --- | --- |
| **Objectives** | **Approach of project** |
| Specific challenge and end users’ involvement |  |
| Unique selling proposition |  |
| Commercialisation leader |  |
| Route to market |  |
| Dissemination and target groups |  |

# Section 1: Relevance and scope

**Recommended total length of section 1 is 5 pages**

This section is concerned with features distinguishing the proposed solution from others, both existing and planned and its comparative advantage for end-users (all levels) and in the marketplace. Describe an example scenario (1.1), outline the essence and uniqueness of the project proposal and the final solution (1.2), describe its comparative advantage (type and degree of innovation) (1.3), and nail down key performance indicators of the project (1.4).

## 1.1 Example scenario

Please provide a scenario showing the solution in use by relevant user group(s) (max ½ page). The scenario should visualise the benefit for the primary end-users and other relevant user groups and the pre-requisites for achieving these benefits (e.g. funding, knowledge and training, support service etc.) Use personas to make the scenario as real as you can. Include also business aspects into the example scenario (who is paying for the solution or service?).

## 1.2 Essence and uniqueness of project

**This is not the proposal abstract,** but a free-text description of the distinguishing features and value proposition behind the proposal. The following questions could help you to structure the project description: What is the rationale behind your proposal? What end-user challenges (needs and wishes) are being targeted? Which stakeholders (parts of the value chain/network) do you integrate and in what way? What are your target groups for the final product (market segmentation)? How will the proposal lead to an innovative, effective and coherent solution to the identified challenges? A general description of the rationale behind AAL and the demographic challenges in Europe is not required; however, local incentives and challenges may be described where appropriate to explain the proposed approach.

## 1.3 Comparative Advantage / Innovation

What is the comparative advantage of your proposed solution over existing solutions? What is the most important innovative aspect of your project (incremental or radical innovations, related to organisation, service and business model, or other elements)?

## 1.4 Key Performance Indicators

In this paragraph please give quantitative and qualitative Key Performance Indicators **for the project phase**. *(These indicators of success criteria achievement during the project period are important elements in the review process). Please do not describe very general project-management-related key performance indicators like “High quality of all deliverables”. Be as specific as possible in terms of description, timeframe, and value (% or numbers) of the key performance indicator.*

# Section 2: Implementation

**Recommended total length of section 2 is 15 pages (incl. all requested listings).**

This section describes the implementation with respect to the following dimensions: Involvement of end-users (all levels) at different stages, including evaluation of process and results (2.1), Business development plan (2.2), Technology, Standards and Interoperability (2.3.), Project organisation, composition and quality of the consortium, work plan and management structure (2.4), Resources required for successful implementation (2.5.), Risk assessment and management plan (2.6).

## 2.1 Involvement of end-users (all levels)

Describe how relevant end-users[[2]](#footnote-2) will be involved in different phases of the project, including evaluation of process and results (see chapter 11 in the Guide for Applicants) taking into consideration ethics-related aspects (see chapter 9 in the Guide for Applicants and the relevant table in the annex of the Application Form). Specify and justify the chosen type and number of end-users, as well as the inclusion and exclusion criteria for recruitment. Define your target groups (in a market perspective) in terms of age, health status, gender and other dimensions when relevant. Use the same personas from your example scenario. Please include after-sale user requirements into your end-user involvement-tasks, such as prior knowledge, product/solution-specific training, after-sale support and financial assistance.

Describe envisaged significant effects of the solution in action for relevant categories of end-users, providers and funding bodies, as appropriate.

Describe how the project will set up a realistic prototype and a testing and evaluation environment that can demonstrate the Key Performance Indicators (see 1.4). Describe the rationale and the design of the testing and evaluation, including evaluation of main benefits (added value) of using the solution for relevant user groups. A prototype should be ready for testing in M12 after the project start.

## 2.2 Business development plan

Describe how critical stakeholders in the value chain/network will be involved in the project: in research and development, testing and evaluation processes, business model development, market introduction, product distribution and after-sale support. Engagement and influence by **end-users, SMEs and LAEs are to be described, including the business development and market-related role of secondary or tertiary end-user’s organisations during and after the project.**

## 2.3 Technology, standards and interoperability

Give a step-wise description of the planned technology development and deployment, all the way to the finalised solution and services. Describe how the feedback from end users will be iteratively integrated in the design of the solution. You are advised not to limit this description to “high level acronyms” of ICT-technology methods. Show also what the innovative aspect of your project is and rate the TRL (technology readiness level; chapter 13 in the Guide for Applicants) of your solution. To explain complex systems please use pictures or diagrams.

Please explain how this proposal is based on existing standards to improve interoperability and avoid "lock-in". Include references to relevant standards, norms and regulation globally or within the EU. Note that use of a non-standard solution must be appropriately justified and is only acceptable if a relevant standard does not exist. Also explain its potential contributions to open interfaces and interoperability.

## 2.4 Project organisation, consortium composition and quality, work plan

Describe in short how the organisation and management structures will be set up and utilised in the project, e. g. task distribution, decision making and conflict resolution systems. Map the competences of the project coordinator and partners to the tasks to be performed. Describe how *the capabilities and innovative potentials* of consortium partners are mobilised and utilised. Other management duties - such as how the daily operation of the test environment will be performed, can be included in this paragraph.

Please describe the quality of the partners and the complementarity of expertise (max. half page for each partner; please use the same sequence in the description as employed on the cover page).

Briefly explain the balance of contribution between partners and the added value of the international collaboration. Describe the European dimension and why the project cannot (or should not) be implemented with national partners only. The exploitation of project outcomes (knowledge and products) in a European perspective should be described in section 3). The timing of the different WPs and their components should be shown in a graphical presentation of the various components (Pert diagram or similar). Please fill in the WP templates at the end of this section.

## 2.5 Resources required for successful implementation

Describe the resources needed to perform the planned tasks; how they will be mobilized and deployed in different stages and domains - user and market-related as well as technical and scientific expertise. Explain how supplementary resources may be included (self-funded participants, multipliers, interested parties from the wider ecosystem - sub-contracting is in general not encouraged). Indicate the availability of specific infrastructures, if required. Describe the total costs, the breakdown of the total costs, budget requests for the partners and indicate and justify major project budget positions.

## 2.6 Risk assessment and management plan

Describe the risks identified in the project (by stages) and how the consortium will address them. Please provide details on procedures and capabilities to prevent and abate the identified risks. Describe how the consortium will provide adequate quality control procedures regarding development and release of deliverables, as appropriate to each specific type, e.g. management reports, research notes, market studies, application or service prototypes, test environments, documentations.

**Management Plan:** Briefly introduce the overall organisation of the activities and the work plan (tasks, sequencing, meetings and deliverables).

Individual work package (WP) description: (To be used for each work package, max. 1 page per WP) - More than 5 work packages are not advised.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **WP number** |  | | **WP duration:** | | *e.g. M0 – M18* | | |
| **WP title** |  | | | | | | |
| **Participant no (lead partner first)** |  |  |  |  |  |  |  |
| **Participant short name** |  |  |  |  |  |  |  |
| **Person-months per participant** |  |  |  |  |  |  |  |
| **Objectives of the WP** | | | | | | | |
| **Description of work** (possibly broken down into tasks) including the tasks leaders and role/contribution of partners | | | | | | | |
| **Deliverables of the WP:** no, brief description and project month of delivery | | | | | | | |

*Copy this structure as many times as required (i.e. work packages are defined).*

**Work package (WP) overview list** (*WPs titles are an example*)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| WP no. | WP title | Lead  partic.  no | Lead  partic.  short name | Person months | Start  Month | End  month |
| *1* | *Technology/standardisation* |  |  |  |  |  |
| *2* | *End-user involvement/co creation* |  |  |  |  |  |
| *3* | *Testing and Evaluation* |  |  |  |  |  |
| *4* | *Dissemination & Exploitation strategy* |  |  |  |  |  |
| *5* | *Management* |  |  |  |  |  |
| … | *Add more rows …* |  |  |  |  |  |
|  | TOTAL |  |  |  |  |  |

*Texts in Italics are examples only.*

**Deliverables overview list**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Del. no | Deliverable name | from WP no | Nature/type of deliverable | Dissemination  level  (Public or restricted) | Delivery  date  (project month) |
|  |  |  |  |  |  |
|  | Intermediate Business plan and business model[[3]](#footnote-3)\* |  |  |  | Mid-term of the project duration |
|  | Calendar year report\* |  |  |  | After the end of each calendar year |
|  | Mid-term review questionnaire\* |  |  |  | Mid-term of the project duration |
|  | Exploitation plan\* |  |  |  | Mid-term of the project duration |
|  | Final Business plan/Business model\* |  |  |  | Before end of the project |
|  | Final report\* |  |  |  | Two months after the end of the project |
|  | *Add more rows as required* |  |  |  |  |

**Milestones overview list**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Milestone name | WP involved | Expected date (project month) | Means of verification |
|  |  |  |  |  |
|  | *Add more rows as required* |  |  |  |

**Summary overview of staff effort in person months** (PM)

*NB: consortia should be aware that partners with more than 25% of the PM cannot, in principle, be replaced (and thus the proposal cannot be reconfigured - see the Guide for applicants)*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Partic. no | Participant short name | WP1 | WP2 | WP3 | WP4 | WP5 | … | Total pm |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| … | *Add more rows as required* |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |

Please make clear how much effort is planned in terms of person months for business-related tasks compared to the overall number of person months needed. Furthermore, show how many person months are spent by business project partners (legal status, main focus of the company that is making profit).

As mentioned above, Include PERT, GANTT or similar diagrams to visualise the project sequences and cycles and the interdependency of the work packages.

# Section 3: Impact

**Recommended total length of section 3 is 7 pages.**

This section should describe how the planned solution is expected to benefit different groups of end-users (3.1 Impact on end users) and impact on market development and business innovation (3.2 Impact on market development). Please use personas and the example scenario from Section 1 to demonstrate the expected impact, including benefits as well as new challenges (e.g. familiarity and possession of ICT-equipment, need for updates and support services).

## 3.1. Impact on end-users

### 3.1.1 Improving Quality of Life for primary and secondary end-users

Describe how the proposed solution will improve quality of life for primary and secondary end-users and how it will affect other relevant user groups (Guide for Applicants; 6.2 Potential Impact of the Proposed Solution on Quality of Life. What aspects of quality of life are being targeted? e.g. independence, mental state, social inclusion, etc.). Describe how the project plans to adapt the solution to different social and organisational systems across Europe, also different funding systems, when relevant.

### 3.1.2 Effect on service models

Describe current service-models in the domain targeted by the proposal and explain how they will be affected by the proposed solution. Describe how your solution is enabled by, or may require, innovations in technology, work organisation, service delivery and funding mechanisms. Please provide cost-benefit analysis (or estimate) for the secondary and tertiary end-users responsible for financing, service delivery or product approval and regulation.

### 3.1.3 Social and ethical impact

Describe the social and ethical impact of the proposed solution on relevant groups of end users, their networks and society at large. Consider both short-term and longer-term impacts.

### 3.1.4 Opt-out, exit strategies and drop-out management

Describe the options offered to end-users for opting out during the project period, including the strategy for handling the risks involved (to the end-users and to the project itself). Outline the plan for follow-up of end users after project completion, such as handling of test devices, information and support services. Describe how the project will manage dropouts in the pilot phases (how to detect and take measures to compensate). Please give a short description of positive exit strategies for the end-users involved at the end of the project period.

## 3.2 Impact on market development

### 3.2.1 Business components

In this section please describe the following aspects of your business plan components and show all activities necessary to reach the market on a timeline.

**Product/Solution**

What product/service will you offer to each targeted end-user group? Describe the specific challenges to be met by the product as it is adopted by the relevant end users. Describe the competition for your product/solution and compare existing and expected products with yours. What will be the product’s unique selling proposition relative to present and future competitors?

The target groups of the partner countries in the AAL Programme represent large diversity in user aspirations, interests, needs and capabilities, and they live in different organisational and economic systems. If relevant, can the product (or product concept and business model) idea be modified to accommodate other markets in different environments than those targeted in the proposed project?

**Target Group & Market**

Describe the targeted group(s) and market(s) for your solution, including alternative funding models in different segments and countries: Who will use the product/service? Who are the different stakeholders in the value network and how are they connected? Who are your competitors? Provide an estimate of the potential of the targeted markets and specify vital conditions for realising this. Avoid referring to general AAL market potential figures.

**Business model**

Describe your business model and how the consortium plans to enter the market (use tools like business model canvas or similar tools to visualise your business model). Explain the role of the partners in the commercialisation including who is taking the lead in marketing the product after the project (in which markets).

Figure out a first cost calculation for the product and a target pricing; consider efforts and costs for after sales services and support.

**Resources**

Describe what resources (human, material and financial) will be required to bring the product to the market (also regarding the phase after the AAL project). Refer to the team which will contribute in this process: Which partner has market experience? Who in the consortium will own the product (to be handled in the IPR agreement) and who will be responsible for the market entry (or entries). Make clear how each partner will exploit the project results for organisational and business purposes. What/which external stakeholder(s) will be necessary for the proposed product/solution to succeed in the market? (e.g. manufacturing, investments, designer, service provider, etc.). What is the estimated cost to enter the market with the developed product/service and how will this be financed?

### 3.2.2 Sharing of project knowledge - dissemination

Describe how project knowledge (including business relevant, but not business-sensitive results) is to be disseminated. What roles are end users at different levels expected to play in knowledge dissemination and market development during the project and upon project completion? How can the knowledge developed in the project contribute to the European market for attractive and cost-effective solutions for Active Ageing? Which target groups are you approaching with what message, when and how (dissemination channel)? Make sure to include the participation of the project in the AAL Fora. Try to be as specific as possible when setting-up your dissemination plan.

### 3.2.3 Intellectual Property Rights management (IPR) and other legal issues

Describe IPR handling and any other legal issues (see also chapter 10 in the Guide for Applicants) including the role of end-users’ organisations. Describe how RTD performers and others will grant access to background knowledge of other consortium partners (e.g. the users/user organisations).

Refer, if needed, to the skeleton of an AAL Consortium Agreement and information/support from the IPR helpdesk.

**Annex: Ethical “declaration” table**

The ethical declaration table below gives an overview of the information required to meet the needs of the Active Assisted Living Programme in this regard (see also chapter 9 in Guide for Applicants).

|  |  |
| --- | --- |
| **Ethics declaration of proposals in the AAL Programme** | **Described on page (x)**  **or “not relevant”** |
| * How is the issue of informed consent handled? How is it handled in case of users with cognitive impairments? |  |
| * What procedures does the proposal have to preserve the dignity, autonomy and values (human and professional) of the end-users? |  |
| * If the proposal includes informal carers (e.g. relatives, friends or volunteers) in the project or in the planned service-model - what procedures exist for dealing with ethical issues in this relationship? |  |
| * If the proposal includes technology-enabled concepts for confidential communication between the older person and informal and formal carers, service providers and authorities – what procedures are planned for safeguarding the right to privacy, self-determination and other ethical issues in this communication? |  |
| * What "exit" strategy for the end-users involved in the project does the proposal have? |  |
| * How are the ethical dimensions of the solution targeted in the proposal taken into account? (Brief description of distributive ethics, sustain­ability etc.) |  |

1. This part refers to projects similar to the one you are submitting – please insert a short paragraph for every project [↑](#footnote-ref-1)
2. Primary, secondary and tertiary, as appropriate. [↑](#footnote-ref-2)
3. \* Mandatory deliverable [↑](#footnote-ref-3)