**Product Readiness Levels across Product Types**

AGE-WELL has adopted and modified a well-validated scale called the Technology Readiness Levels (TRL). We have modified this scale for use across the three different products that AGE-WELL projects will produce: 1) technologies; 2) services; and 3) policies, practice, guidelines. We have called the new scale Product Readiness Level (PRL). In your annual reporting you are required to indicate which PRL your project is currently at, and which PRL you expect to be at in the following year. As PRL is a new concept in our network (and in the NCE program) we have provided below a detailed description of level within this scale and potential outputs and activities that would be indicative of the completion of PRL. **These are just examples and it is not meant to be an exhaustive list**. We fully expect that each project will have their own outputs for each PRL that are unique to your own project. We will continue to populate this table as new examples arise from the completion of this annual report by each project.

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| **Stage** | **PRL Scale** | **PRL Description** | **Technology Product** | | **Service Product** | | **Policy and Practice Product** | |
| Devices, systems, applications, online services etc:   * Robots * Smart homes * Sensor systems * Apps | | Services that researchers could provide to other AGE-WELL projects, industry, care providers etc:   * Market analysis * Market data * Independent test labs and field trials * Tools to conduct user-centered R&D * Consultancy | | “Knowledge-based” products aimed at increasing uptake and use of technology-based solutions   * Guidelines for use of technology * Policy on funding new technology * Model for incorporating technology into care process or service * Care service model * Whitepapers/Position papers | |
| **Example Outputs** | **Example Activities** | **Example Outputs** | **Example Activities** | **Example Outputs** | **Example Activities** |
| **INNOVATION RESEARCH** | PRL 1 | Basic principles and pre-discovery research completed and reported | Outcomes of initial research into new product concept, needs analysis, etc.  Product concept developed  Preliminary market analysis | Needs analysis and definition; user-focused research- interviews/focus groups/ workshops; literature work etc  Presentations, posters, articles; Engagement with industry or community partners  Basic market research- market size and structure | Initial ideas for potential service concept developed  Preliminary market analysis  Outcomes of initial research into new product concept, needs analysis, etc. | Needs analysis and problem definition; user-focused research- interviews/focus groups/ workshops; literature work etc.  Presentations, posters, articles; Engagement with industry or community partners | Initial ideas of new policy and practice changes that are needed  Policy and practice concept developed  Preliminary market analysis | Needs analysis and problem definition; user-focused research- interviews/focus groups/ workshops; literature work etc.  Presentations, posters, articles; Engagement with industry or community partners |
|  | PRL 2 | Product concept and/or practical applications formulated. | Initial Prototype  Full proposal for R&D phase  Initial business plan outlined;  IP strategy drafted | Initial Prototype design, software architecture drafted & budgeted  Preliminary business planning | Service concept developed and prototyped  Key data validated and implemented into service | Initial prototype design, including service delivery model  Discussions with potential partners/clients  Identification of possible funding/co-funding sources | Care service concept finalization; Standardizations of service offering  MoU with partners | Engagement of end user/participant- workshops  Discussions with partners  New care strategy development; |
| **INCUBATOR** | PRL 3 | Analytical and experimental proof of concept of critical function and/or characteristics of new product | Beta version/prototype created  Outcome of more in-depth study with new product, including bench testing of technology (hardware, software, components)  IP protection (e.g. patent applications)  Use cases; requirements definition/ initial prototype/Mock-up. Proof of concept report | Market analysis- exploring barriers to market with end-users and stakeholders. Preliminary Business Plan validated by AW commercialization team  Prototype development  Workshops and interviews with demos of initial idea paper/ storyboard/Theatre methods; Proof of concept completed with small group of users  Controlled experiments of system components | Beta version/prototype of service created  Use cases; requirements definition/ initial prototype/Mock-up.  Proof of concept report; | Market analysis- exploring barriers to market with end-users and stakeholders. Preliminary Business Plan validated by AW commercialization team  Engagement activities with key stakeholders | Feasibility study | Analysis of economic, technological and operational issues  end user participation |
| **PROTOTYPE** | PRL 4 | Validation of the product in the laboratory. | Outcomes of validation/pilot study  Agreement signed with partner | Prototype tested and validated at the scientific level (studies conducted).  Feedback on demonstration of basic prototype to end-users; lab-testing of components with end-users; Large target population (seniors) study conducted; Users feedback collected | Outcomes of validation/pilot study  Agreement signed with partner  Plan for service delivery | Prototype services and service delivery models tested and validated by key stakeholders  Feedback on demonstration of services to be offered by potential end-users/customers | Service blueprint | Iterative refinement of service system design with stakeholders and partners |
| PRL 5 | Validation of product in a relevant environment. | Close to final lab prototype validated by end-users  Results of larger-scale study/trial  Start-Up created or company licensing | Iterative development of several prototypes;  On site/ real environment (e.g., company site) beta testing study with users | Results of larger-scale study/trial  Close to final version of the service product and service delivery model | Roll-out of new services to key end-users  Pilot study to measure efficacy of the new service and effectiveness of delivery model |  |  |
| **EXPERIMENTAL IMPLEMENTATION** | PRL 6 | Demonstration of product in relevant environment. | Demonstration report  Pre-commercial prototype | Proof-of-concept  Testing of demonstrator/prototype with a end-users in controlled situation  Participant feedback collected  Technology modifications conducted | Demonstration report  Pre-commercial prototype of service product and service delivery model | Larger scale trials of new service and delivery models  Completion of economic models and cost-benefit analysis  Comparative study between new service with current models | Full service protocol and operational plan | Service protocol development and operational planning with partners  putting supporting facilities and resources in place |
| PRL 7 | Product prototype demonstrated in an operating environment. | Implementation and field trial report | Field trial of pre-commercial system/device in large-scale operational environment with end-users Field trial of pre-commercial system/device in real | Implementation of field trial report  Final service delivery model | Field trial of pre-commercial service in large scale operational environment with end users | Process evaluation report | Pilot trial of service in real environment without supervision; |
| **OUTCOMES** | PRL 8 | Product completed and qualified through test demonstration | Evaluation report | Technology is proven to work - Actual technology completed and qualified through test and demonstration; Legal validation and process (FDA, industry standard, etc.) | Evaluation report | Service and delivery models are proven to work - Actual service completed and qualified through test and demonstration;  Legal validation and process (FDA, industry standard, etc.)  Economic/costing model of service delivery finalized | Evaluation report –  Mixed methods analysis of service impact and acceptability  Cost-benefit analysis  Implementation plan | Implementation planning with service partners  Full analysis of pilot data |
| PRL9 | Product in its final form ready for full (commercial) deployment in relevant operating environment. | Market deployment and maturity | Full-scale production; market strategy defined, legal agreements in place with industry partners (e.g., manufacturing, etc.), and founders, solution ready to be launched on the market. | Fully deployed service product and service delivery model | Full-scale delivery of service; market strategy defined, legal agreements in place with industry partners  Service ready to be launched on the market. | Adoption of technology into service/care provider  Position paper referenced | Integration of service into mainstream operations by partner organisation |

