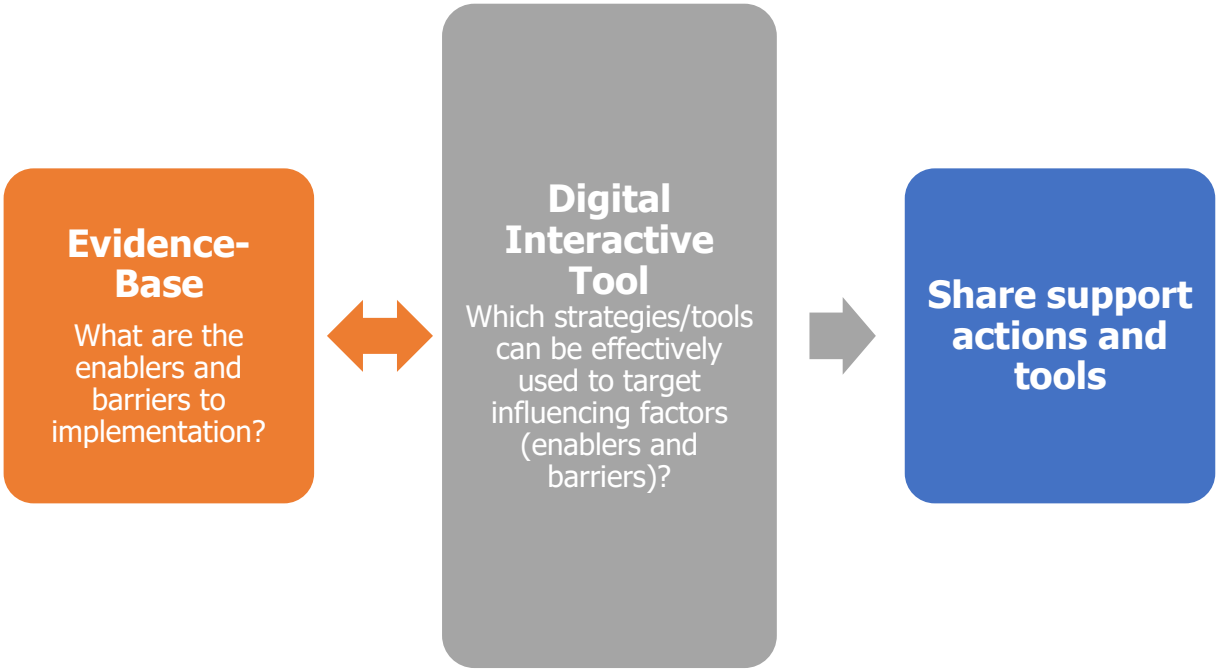
Guidance on how to use SITAS

(Selecting Implementation Tools and Actions for Standards)



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Introduction

The Standards Team at HIQA set a strategic objective in the Health and Social Care Standards Strategy 2022-2024 to support the implementation of national standards, in order to drive improvements and consistent interpretation within health and social care services.[1] This objective encompassed key priorities that included:

- Adopting an implementation science approach across the standards setting function
- Reflecting the scientific methodologies in the team's processes and
- Developing methods for the development of support tools for standards.

Adopting an implementation science approach seeks to learn and understand how standards work in 'real world' settings. Implementation science is the scientific study of methods and strategies that promote the uptake of research and evidence-based practices such as national standards into routine practice.[2] The main goal of such strategies is to overcome barriers and facilitate implementation.[3] Tailoring implementation strategies ensures they are suitable for the intended users and services.[4] Examples of implementation strategies are support tools such as posters, fact sheets and e-learning modules.

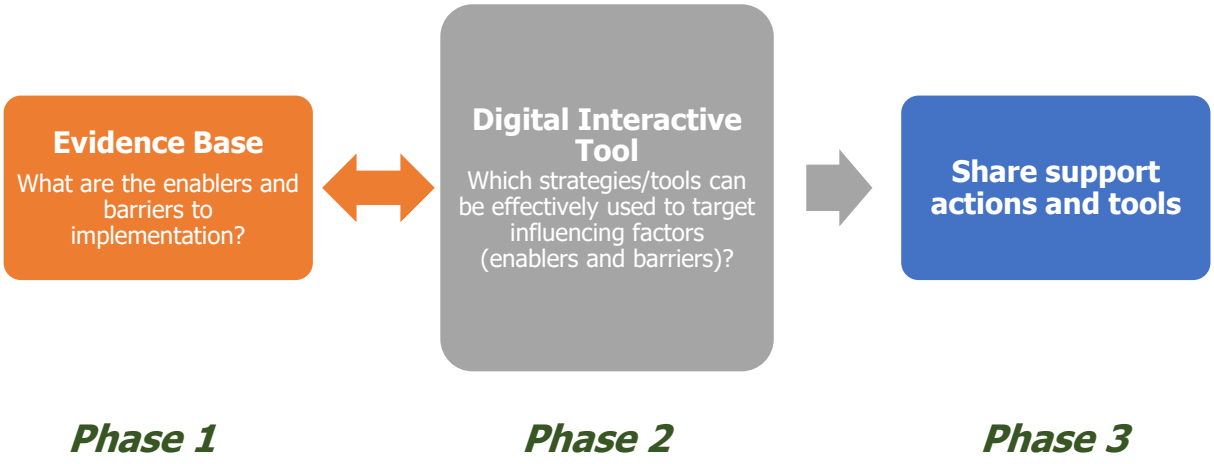
The first step in selecting implementation strategies is to identify and assess factors that influence implementation.[4] This involves identifying factors that act as enablers and or barriers to implementing standards, matching strategies to these enablers and barriers, applying these strategies in practice and finally assessing their effectiveness through implementation outcomes. It is important to apply implementation theory to describe and guide the process of translating standards into practice; to explain and facilitate an understanding of what influences implementation outcomes; and to evaluate the implementation of standards in practice.[4]

We have developed a process entitled SITAS (Selecting Implementation Tools and Actions for Standards). The aim of SITAS is to guide you through the process of selecting support tools and actions for a specific set of standards. This process has been informed by implementation theories and frameworks.

SITAS (Selecting Implementation Tools and Actions for Standards)

SITAS is a process with three phases (figure 1). Each phase is described below.

Figure 1: SITAS

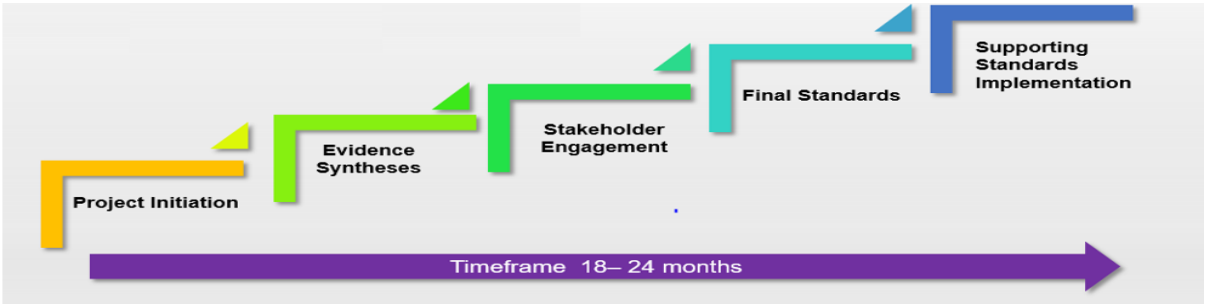


1. Phase one of SITAS

Evidence Base

Phase one of the process is entitled 'evidence-base' and comprises an exploration of the evidence to identify and describe the enablers and barriers to implementing a specific set of standards. This exploration takes place during the standards development process (figure 2).

Figure 2: How National Standards are developed



The Standards Development Process involves four stages: scoping review and consultation; evidence review; public consultation; final standards. The following sets out how you can identify and describe the enablers and barriers to implementing standards throughout the standards development process.

1.1 Scoping review and consultation

While the initial scoping consultation (public consultation survey and focus groups) cannot examine the implementation of the set of standards at that early stage, questions are asked of stakeholders in relation to what is working well and what needs to be improved in the area and what are the important outcomes for service users.

Advisory group

The standards advisory group assists the team during each stage of the development process of the national standards. In addition to providing support and collaboration on the development of the standards, the advisory group provides vision and insight on how to support the implementation of the standards in practice. During consultations with the advisory group members, prompts for discussions relating to implementation include:

- How can we ensure the standards are implementable?
- What will be different as a result of implementing the standards?
- Who are the key stakeholder groups that need to make changes to implement the standards in your organisation?
- Are there other initiatives taking place in your organisation that make it easier (or more difficult) to implement the standards?
- What key organisations or individuals should we engage with when selecting (and developing) implementation tools to support the implementation of the standards?
- What additional steps could be taken to help with implementation of standards?
- What is the gap or barrier we wish to address with implementation support tools?
- How can you and your colleagues promote the implementation of standards in your organisation?
- What educational materials would be useful to support the implementation of the standards? (and explore - for whom, where, how, what will be different?)

1.2 Evidence Review

Literature review

Examples of research questions on implementation of standards that can be considered when conducting a review of the literature are as follows:

- What are the enablers and barriers influencing implementation of standards (in the particular topic area, for example, in home care services)?
- What implementation strategies are applied to address enablers and barriers to implementing standards (in the particular topic area, for example, in home care services)?
- What methods have been used to evaluate the implementation of standards and implementation strategies (in the particular topic area, for example, in home care services)?

International review

As part of the evidence review, an international review is conducted, including a review of information from authoritative international websites, national reviews, annual reports and statistical reports from key organisations, academic papers and videoconferences with international experts in this area from Ministries of Health, standards development teams and health and social care regulators. The structure of the write-up of these reviews includes a section on implementation of standards that can identify key areas of success and or challenges with implementation.

The standards team engage with key stakeholders in international jurisdictions. Questions for interviews with international contacts relating to implementation of standards can include:

- Can you describe how the standards were implemented in your country?
- What were the facilitators that helped it happen?
- What were the barriers you came up against (if any) and how did you overcome them?
- What are the challenges to implementing the standards in practice?
- Has there been any evaluation of the effectiveness or impact of the standards?
- What was the key learning?
- Is there anything you would do differently?
- Were any additional tools developed to support implementation?

1.3 Public Consultation on the draft standards

Surveys

A public consultation survey is held over a minimum period of six weeks, during which time interested parties have an opportunity to make submissions on the draft national standards. Board members and the standards advisory group are also asked to participate in this process. Submissions received during this consultation are analysed in detail and updates are made to the standards based on the feedback received. Questions asked relating to implementation can include the following:

- Is the language used in the draft standards clear, easy to follow and easy to understand?
- Is the content and structure of the draft standards clear, easy to follow and easy to understand?
- Do you think there will be challenges implementing these standards? If so, please describe:
- What do you think is working well at the moment that would help to implement these standards?
- What additional tools, guidance or educational materials do you think are needed to support the implementation of these standards in the service you use or work in?

Stakeholder engagement

Stakeholder engagement as part of the public consultation comprises ongoing engagements with stakeholders who have experience of receiving health and social care services, and staff members providing these services, as it provides an opportunity to more deeply understand how these services work in practice. The purpose of this engagement includes identifying what is needed to support the implementation of the standards. Engagement is achieved through: advisory group meetings, one-to-one meetings with stakeholders and focus groups. Questions to ask during these stakeholder engagements relating to the implementation of standards can include:

- Do you think the language and format is accessible and clear?
- What is needed to support the implementation of these standards in the service you use or work in?
- What do you think will be the challenges (if any) to implementing these standards?
- Who needs to do what differently in order for the issues to be addressed?

- What do you think is working well at the moment that would help to implement these standards?
- What additional tools, or educational materials do you think are needed to support the implementation of these standards in the service you use or work in?

Factors identified as challenges or as helping implementation of the standards following the evidence review and stakeholder engagements should be collated and categorised as an enabler or barrier and then applied to phase two of SITAS. It is appropriate to apply enablers and barriers to phase two at key stages of the standards development process.

2. Phase two of SITAS

Phase two is applying those enablers and barriers identified in phase one (during the standards development process) to a digital interactive tool. The digital tool can be used as required at key stages of the standards development process. The tool is a process flow of interactive digital based questions and answers, comprising five steps. These five steps are described below.

Step 1 begins with statements describing the influencing factors (enabler or barrier) to implementing national standards. The user will identify if a statement is describing an enabler or barrier to implementing the set of standards as identified in phase one of SITAS, using a 5-point Likert scale with responses from 'Definitely' to 'Definitely not'. The statements have been informed by a review of the international literature and a qualitative exploration of experiences implementing national standards. It is possible that some statements listed in step one may not be identified as an enabler or barrier throughout the standards development process. In this instance, the user should use the option 'I don't know.'

When all statements are selected, **Step 2** will generate a list of target end-users. Target end-users are ultimately the individuals who will be using the support tool or who the support action is aimed at. Select from the list, target end-users that you wish to focus on for the implementation strategies you will select in step 4 (table 1).

Table 1: List of target end-users contained in SITAS

Target end-users for support tools and actions to support implementation of national standards
People using services
Service level managers

Local champions
Individual staff member
Policy-makers
HIQA staff
Academic staff (third level educators / lecturers)
Administration support staff in services
Undergraduate, postgraduate students
Advocates
Individual unit managers in services

Step 3 will produce a list of targeted behaviour change intervention types. This step introduces behaviour change theory into the process. The list classifies the intervention or implementation strategy function which broadly sets out how the strategy can change a behaviour. There are nine ways of classifying the implementation strategy function and these are: education, persuasion, incentivisation, coercion, training, enablement, modelling, environmental restructuring, and restriction (table 2). This list is taken from the Behaviour Change Wheel (BCW) framework.[5] Please refer to Appendix 1 for further information on the BCW and how we used the BCW to inform step 3.

Table 2: Step 3 of SITAS that classifies the implementation strategy function using behaviour change interventions

The following behaviour change interventions are ordered by priority according to the answers you provided in Step 1	
What is your support tool or action looking to achieve?	
1.	Is it to educate? (to increase knowledge and understanding of the standards)
2.	Is it to persuade? (to change attitudes, beliefs or emotions associated with the standards)
3.	Is it to incentivise? (to enhance motivation to implement the standards)
4.	Is it to enable? (to encourage capability and opportunity to implement the standards)
5.	Is it to train? (to impart skills and acquire competence to implement the standards)

6.	Is it environmental restructuring? (to change the physical or social context)
7.	Is it modelling? (to provide an example for people to aspire to or imitate)
8.	Is it to restrict? (set limitations to modify opportunities to implement standards)
9.	Is it coercion? (to influence an action using enforcement, for example regulations)

Step 4 will produce a prioritised list of corresponding implementation strategies auto-generated from your responses to step 1. Select the implementation strategies that are the most appropriate and applicable for the specific set of standards you are working on. The CFIR-ERIC (Consolidated Framework for Implementation Research - Expert Recommendations for Implementing Change) Implementation Strategy Matching Tool v.1 was used to inform the list of implementation strategies.[6] This list comprises 31 implementation strategies and provides clear definitions of each strategy (table 3). This list has been drawn from the Expert Recommendations for Implementing Change (ERIC) compilation of 73 implementation strategies. Careful attention is required to ensure congruence between choice of implementation strategy and behavioural change interventions selected in step 3.[5,7] Please refer to Appendix 2 for an explanation of the CFIR-ERIC Implementation Strategy Matching Tool and how we used it to inform step 4.

Table 3: List of implementation strategies and their definitions contained in SITAS

Implementation strategy	Definitions
Access new funding	Services need to access new or existing money to facilitate the implementation.
Alter incentive/ allowance structures	Work to incentivise the adoption and implementation of the standards.
Assess for readiness and identify barriers and facilitators	Services assess various aspects of the service to determine its degree of readiness to implement, barriers that may impede implementation, and strengths that can be used in the implementation effort.
Audit and provide feedback	Collect and summarise performance data over a specified time period and monitor, evaluate, and modify accordingly.
Build a coalition	Build relationships with partners in the implementation effort
Capture and share local knowledge	Capture local knowledge from services on how implementers and staff made something work in their service and then share it with other services.
Change physical structure and equipment	Services need to evaluate current configurations and adapt, as needed, the physical structure and/or equipment (e.g., changing the layout of a room, adding equipment) to best accommodate the standards.
Conduct educational meetings	Hold meetings targeted towards different stakeholder groups (e.g., providers, administrators, staff members, and community, service-user, and family members) to teach them about the standards.

Conduct local consensus discussions	Include service providers and other stakeholders in discussions that address whether the chosen problem is important and how to address it, is appropriate.
Conduct local needs assessment	Services collect and analyse data related to the need/ area for improvement to effectively implement the standards.
Conduct ongoing training	Plan for and conduct training on the standards in an ongoing way.
Create a learning collaborative	Facilitate the formation of groups of providers and foster a collaborative learning environment to improve implementation of the standards.
Develop a formal implementation blueprint/plan	Services develop a formal implementation blueprint that includes all goals and strategies, for example, 1) aim/purpose of the implementation; 2) scope of implementation); 3) timeframe and milestones; and 4) appropriate performance/progress measures. Use and update this plan to guide the implementation effort over time.
Develop academic partnerships	Partner with a university or academic unit for the purposes of shared training and bringing skills to standards.
Develop and implement tools for quality monitoring	Develop, test, and introduce into quality-monitoring systems, tools that measures processes, patient/consumer outcomes, and implementation outcomes that are specific to the standards being implemented.
Develop educational materials	Develop and format manuals, toolkits, and other supporting materials in ways that make it easier for providers (and staff members) to learn about the standards and how to apply the standards in practice.
Distribute educational materials	Distribute educational materials in person, by post, and/or electronically.
Facilitate relay of clinical data to providers	Services provide as close to real-time data as possible about key measures of process/outcomes in a way that promotes use of the standards.
Facilitation	A process of interactive problem solving and support that occurs in a context of a recognised need for improvement and a supportive interpersonal relationship.
Fund and contract for the clinical innovation	Service funders issue requests for proposals to implement the standards, use contracting processes to motivate providers to deliver the standards, and develop new funding formulas that make it more likely that providers will implement the standards.
Identify and prepare champions	Identify and prepare individuals who dedicate themselves to supporting, promoting, and driving through on implementation, overcoming indifference or resistance that the standards may provoke in a service.
Identify early adopters	Identify early adopters in services to learn from their experiences with implementing the standards.
Inform local opinion leaders	Inform providers, identified by colleagues/ stakeholders as opinion leaders or "educationally influential", about the standards in the hopes that they will influence services/staff to adopt them.
Involve executive boards	Involve existing governing structures (e.g., boards of directors, service committee boards) in the implementation effort.
Involve patients/ consumers and family members	Services engage or include people using the services and families in the implementation effort.

Obtain and use patients/consumers and family feedback	Services develop strategies to increase feedback from people using the service and families on the implementation effort
Organise clinician implementation team meetings	Services develop and support teams of staff members who are implementing the standards and give them protected time to reflect on the implementation effort, share lessons learned, and support one another's learning.
Encourage patients/consumers to be active participants	Services encourage people using the service to be active in their care, to ask questions, and specifically to inquire about the standards.
Promote adaptability	Identify the ways the standards can be tailored to meet local needs and clarify which elements of the standards must be maintained to preserve fidelity.
Promote network weaving	Identify and build on existing high-quality working relationships and networks within and outside services and teams, to promote information sharing, collaborative problem-solving, and a shared vision/goal related to implementing the standards.
Recruit, designate and train for leadership	Services recruit, designate, and train leaders for the implementation effort.

Step 5 will produce a list of support actions and tools that can be undertaken or developed. This list is auto-generated according to items selected in steps 2, 3 and 4. Select from the list, support tools and actions that are most appropriate and applicable for the specific set of standards (table 4).

Table 4: List of support tools and actions contained in SITAS

Support tools to support implementation of national standards
Video animation
Decision-making flowchart
Easy-to-read version of the standards + support tools
Educational slide-deck for educators/ lecturers
E-Learning module
Fact Sheet
Guidance document
Policy brief
Poster
Self-assessment (self-audit) tools
Webinar (recorded perpetual resource)
Support actions to support the implementation of national standards
Dissemination plan to inform HIQA's inspection team of the standards and support tools
Dissemination plan - educational material (in person, by post, electronically)
Feedback to the standards advisory group members
Feedback to service leadership

Presenting at a conference
Recommend services to include people using the service in implementation
Recommend use of local champions
Roadshow by Standards Team for services
Shared learning forum
Tutorial (guest lecture) at a university
Using social media
Workshop by Standards Team for services

Limitations

SITAS was designed to streamline the process and assist decision-making when identifying, selecting and developing support tools and support actions to enhance the implementation of national standards in practice. Therefore, it will not identify a definitive implementation strategy that will act effectively. Context and the needs of each standards project may evolve over time and thus SITAS will evolve too. As such, users of SITAS need to be sensitive to the dynamic needs of service providers. SITAS will have to undergo further validation testing prior to full implementation.

Decisions made when selecting and prioritising options from individual steps in the digital tool (phase 2) are based on the users' perceptions on what is deemed important. There is a risk that some options may be missed in favour of more familiar ones and a perceived feasibility of options. However, this digital tool represents the first step in creating a platform that can optimise how we move national standards into practice more efficiently and rigorously, with potential to improve health outcomes and experiences for people using health and social care services.

3. Phase three of SITAS

Phase three is sharing the outputs from the steps within SITAS with the standards project team and making decisions to proceed with developing selected support tools and or recommending support actions.

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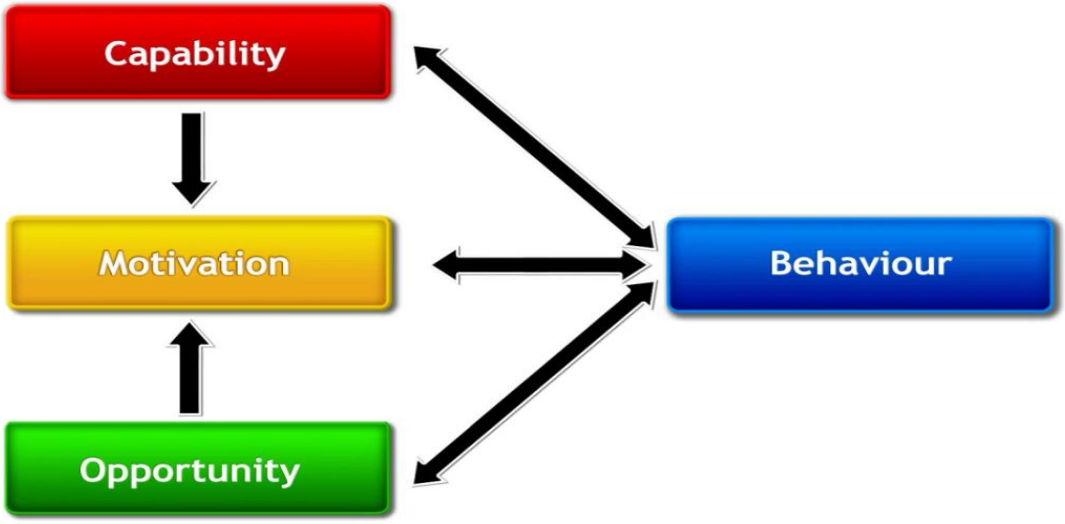
Appendix 1: Behaviour Change Wheel

The Behaviour Change Wheel (BCW) is a synthesis of 19 behaviour change frameworks that draw on a wide range of disciplines and approaches.[5] It is made up of 3 layers. Two layers of the BCW were used when designing the digital tool (phase 2 of SITAS). The inner layer of the BCW is the COM-B model which is a simple model for understanding behaviour. It outlines the necessary conditions for behaviour to occur and they are capability, opportunity, and motivation, all of which, interact to generate behaviour and each have influence over each other. The COM-B model gets its name by taking the initial letters of each of its three components and combining it with the B of Behaviour. The three components Capability, Opportunity, Motivation (figure 3) can be broken down further and are defined as follows:

- **Capability** is divided into Physical Capability and Psychological Capability.
    - Physical Capability (C-Ph) refers to a person's abilities arising from their physique and bodily functioning.
    - Psychological Capability (C-Ps) refers to a person's ability to perform a behaviour arising from their psychological functioning, for example knowledge and skills.
- **Opportunity** is divided into Social Opportunity and Physical Opportunity.
    - Social Opportunity (O-So) refers to a person's opportunity to enact a behaviour relating to the social world they inhabit, including the rules and norms that are operating and social cues.
    - Physical Opportunity (O-Ph) refers to a person's opportunity to enact a behaviour that arises from objects and events in their environment, the space they inhabit, the time available or the material and financial resources available to them.
- **Motivation** is divided into Reflective Motivation and Automatic Motivation.
    - Reflective Motivation (M-Re) refers to psychological processes of conscious planning and decision making.
    - Automatic Motivation (M-Au) refers to motivation that involves a) responding habitually or instinctively, or b) wants and needs arising from emotions or drives.

Figure 3: Behaviour Change Model (Reproduced with permission)



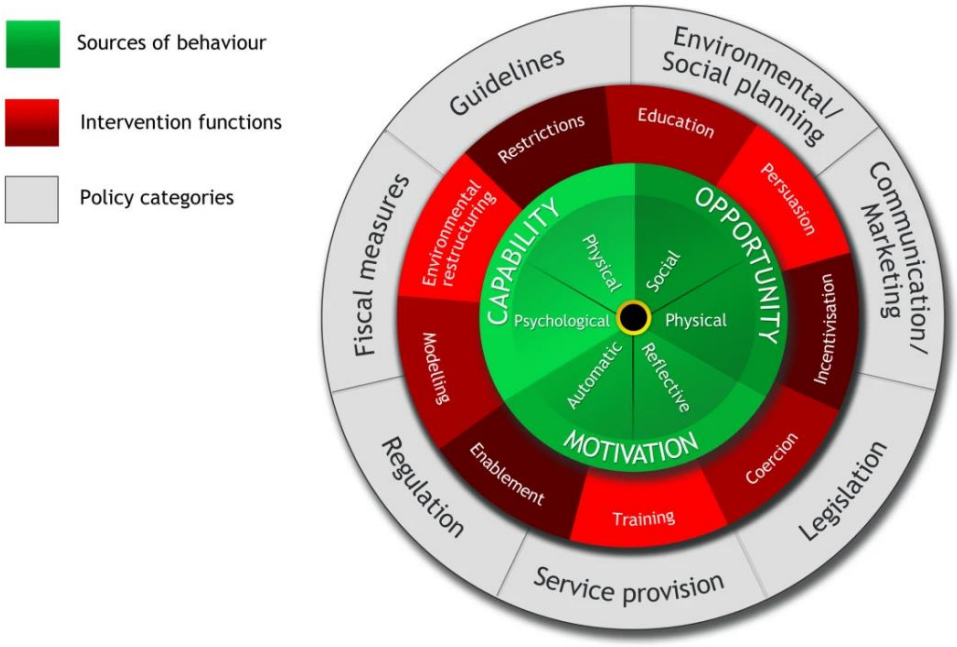
The COM-B system - a framework for understanding behaviour.

The second or middle layer of the BCW concentrates on nine intervention types. This classifies the intervention or implementation strategy function which broadly sets out how the strategy can change a behaviour (figure 4). These are education, persuasion, incentivisation, coercion, training, enablement, modelling, environmental restructuring, and restriction.[5] Descriptions of the nine intervention types are as follows:

- **Education** works by informing or explaining things to increase knowledge or understanding relating to a behaviour.
- **Persuasion** works by using words and images to get people to feel a liking or a disliking for something in order to influence behaviour.
- **Incentivisation** works by applying rewards to a behaviour.
- **Coercion** works by applying costs or punishments to a behaviour.
- **Training** works by using demonstration, feedback, and practise to improve physical or psychological skills.
- **Enablement** works by providing physical or social support or material or financial resources that make it possible to, or easier to enact a behaviour.
- **Modelling** works by providing an example for people to imitate, learn from, or aspire to.
- **Environmental restructuring** works by shaping the physical or social world inhabited by a person to make a behaviour easier or harder or appear more or less normal or to add or to remove prompts.

- **Restriction** works by using formal social rules to set boundaries for a behaviour.

Figure 4: Behaviour Change Wheel (Reproduced with permission)



The BCW links different COM-B components to different intervention types. The intervention type(s) are those most likely to be effective to change the behaviour you are interested in and will depend on the aspects of Capability and/or Opportunity and/or Motivation that you have decided need to change. Table 5 summarises how the six COM-B components are linked to the nine intervention types. A mark (√) indicates that an intervention type may be effective in modifying a COM-B component. For example, Psychological Capability may be changed by Education, Training and Enablement. Each intervention type can be used to target more than one COM-B component.

Table 5: Intervention types linked to COM-B components[5] (Reproduced with permission)

Intervention Types									
***COM-B**	**Education**	**Persuasion**	**Incent-ivisation**	**Coercion**	**Training**	**Restriction**	**Environmental restructuring**	**Modelling**	**Enablement**
C-Ph					√				√
C-Ps	√				√				√
M-Re	√	√	√	√					
M-Au		√	√	√			√	√	√
O-Ph						√	√		√
O-So						√	√		√

*Capability, Opportunity, Motivation-Behaviour. C-Ph: Physical Capability, C-Ps: Psychological Capability, M-Re: Reflective Motivation, M-Au: Automatic Motivation, O-Ph: Physical Opportunity, O-So: Social Opportunity

So what does this mean for SITAS?

We have matched the list of statements describing enablers and barriers to implementing national standards (step 1 of SITAS) to the COM-B model to identify the behaviour that needs to be addressed. We then used table 5 to link the COM-B components to intervention types in order to set out what we want our selected implementation stratgies to do or achieve. We have presented this in step 3 of SITAS by asking the user to select the following:

Step 3

What is your support tool or action looking to achieve?

- Is it to educate? (to increase knowledge and understanding of the standards)
- Is it to persuade? (to change attitudes, beliefs or emotions associated with the standards)
- Is it to incentivise? (to enhance motivation to implement the standards)
- Is it to enable? (to encourage capability and opportunity for implementation)
- Is it to train? (to impart skills and acquire competence to implement the standards)
- Is it environmental restructuring? (to change the physical or social context)
- Is it modelling? (to provide an example for people to aspire to or imitate)

- Is it to restrict? (set limitations to modify opportunities to implement standards)
- Is it coercion? (to influence an action using enforcement, for example regulations)

Appendix 2- CFIR-ERIC (Consolidated Framework for Implementation Research - Expert Recommendations for Implementing Change) Implementation Strategy Matching Tool

The CFIR-ERIC (Consolidated Framework for Implementation Research - Expert Recommendations for Implementing Change) Implementation Strategy Matching Tool v.1 was used to inform the list of implementation strategies contained in step 4 of the digital tool (phase 2 of SITAS). The 2009 CFIR* is an implementation determinant framework and has been described as a "one-stop shop" because the framework presents clear and explicit definitions derived from a collection of up to 20 theories, models and frameworks, to describe contextual factors that affect implementation. The framework is set out under five domains and includes a 'menu of constructs' applicable to each domain that characterises contextual determinants of implementation (table 6).[8] The constructs are operational at all levels of the health system. Step-by-step guides and tools are available and accessible to offer guidance on the application of the 2009 CFIR on a dedicated online technical assistance website (www.cfir.org). The purpose of using the 2009 CFIR was to examine patterns between enablers and barriers that have been allocated to the constructs within the framework to match with implementation strategies. As such, the statements describing enablers and barriers to implementing national standards as set out in step 1 of the digital tool, were coded to the relevant constructs of the 2009 CFIR.

* The CFIR was originally published in 2009 and was updated in 2022 based on user feedback. We are using the original version as the CFIR-ERIC Matching Tool has not been updated to reflect changes to CFIR (2022).

Table 6: 2009 Consolidated Framework for Implementation Research (CFIR)[8]

2009 Consolidated Framework for Implementation Research (CFIR Website)		
DOMAINS and Constructs		Short Description
I. INTERVENTION CHARACTERISTICS		
A	Intervention Source	Perception of key stakeholders about whether the intervention is externally or internally developed.
B	Evidence Strength & Quality	Stakeholders' perceptions of the quality and validity of evidence supporting the belief that the intervention will have desired outcomes.
C	Relative Advantage	Stakeholders' perception of the advantage of implementing the intervention versus an alternative solution.
D	Adaptability	The degree to which an intervention can be adapted, tailored, refined, or reinvented to meet local needs.
E	Trialability	The ability to test the intervention on a small scale in the organization, and to be able to reverse course (undo implementation) if warranted.
F	Complexity	Perceived difficulty of implementation, reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required to implement.
G	Design Quality & Packaging	Perceived excellence in how the intervention is bundled, presented, and assembled.
H	Cost	Costs of the intervention and costs associated with implementing the intervention including investment, supply, and opportunity costs.
II. OUTER SETTING		
A	Patient Needs & Resources	The extent to which patient needs, as well as barriers and facilitators to meet those needs, are accurately known and prioritized by the organization.
B	Cosmopolitanism	The degree to which an organization is networked with other external organizations.
C	Peer Pressure	Mimetic or competitive pressure to implement an intervention; typically because most or other key peer or competing organizations have already implemented or are in a bid for a competitive edge.
D	External Policy & Incentives	A broad construct that includes external strategies to spread interventions, including policy and regulations (governmental or other central entity), external mandates, recommendations and guidelines, pay-for-performance, collaboratives, and public or benchmark reporting.
III. INNER SETTING		
A	Structural Characteristics	The social architecture, age, maturity, and size of an organization.
B	Networks & Communications	The nature and quality of webs of social networks and the nature and quality of formal and informal communications within an organization.
C	Culture	Norms, values, and basic assumptions of a given organization.
D	Implementation Climate	The absorptive capacity for change, shared receptivity of involved individuals to an intervention, and the extent to which use of that intervention will be rewarded, supported, and expected within their organization.

1	Tension for Change	The degree to which stakeholders perceive the current situation as intolerable or needing change.
2	Compatibility	The degree of tangible fit between meaning and values attached to the intervention by involved individuals, how those align with individuals' own norms, values, and perceived risks and needs, and how the intervention fits with existing workflows and systems.
3	Relative Priority	Individuals' shared perception of the importance of the implementation within the organization.
4	Organizational Incentives & Rewards	Extrinsic incentives such as goal-sharing awards, performance reviews, promotions, and raises in salary, and less tangible incentives such as increased stature or respect.
5	Goals and Feedback	The degree to which goals are clearly communicated, acted upon, and fed back to staff, and alignment of that feedback with goals.
6	Learning Climate	A climate in which: a) leaders express their own fallibility and need for team members' assistance and input; b) team members feel that they are essential, valued, and knowledgeable partners in the change process; c) individuals feel psychologically safe to try new methods; and d) there is sufficient time and space for reflective thinking and evaluation.
E	Readiness for Implementation	Tangible and immediate indicators of organisational commitment to its decision to implement an intervention.
1	Leadership Engagement	Commitment, involvement, and accountability of leaders and managers with the implementation.
2	Available Resources	The level of resources dedicated for implementation and on-going operations, including money, training, education, physical space, and time.
3	Access to Knowledge & Information	Ease of access to digestible information and knowledge about the intervention and how to incorporate it into work tasks.
IV. CHARACTERISTICS OF INDIVIDUALS		
A	Knowledge & Beliefs about the Intervention	Individuals' attitudes toward and value placed on the intervention as well as familiarity with facts, truths, and principles related to the intervention.
B	Self-efficacy	Individual belief in their own capabilities to execute courses of action to achieve implementation goals.
C	Individual Stage of Change	Characterization of the phase an individual is in, as he or she progresses toward skilled, enthusiastic, and sustained use of the intervention.
D	Individual Identification with Organization	A broad construct related to how individuals perceive the organization, and their relationship and degree of commitment with that organization.
E	Other Personal Attributes	A broad construct to include other personal traits such as tolerance of ambiguity, intellectual ability, motivation, values, competence, capacity, and learning style.
V. PROCESS		
A	Planning	The degree to which a scheme or method of behaviour and tasks for implementing an intervention are developed in advance, and the quality of those schemes or methods.
B	Engaging	Attracting and involving appropriate individuals in the implementation and use of the intervention through a combined strategy of social marketing, education, role modelling, training, and other similar activities.

1	Opinion Leaders	Individuals in an organization who have formal or informal influence on the attitudes and beliefs of their colleagues with respect to implementing the intervention.
2	Formally Appointed Internal Implementation Leaders	Individuals from within the organization who have been formally appointed with responsibility for implementing an intervention as coordinator, project manager, team leader, or other similar role.
3	Champions	"Individuals who dedicate themselves to supporting, marketing, and 'driving through' an [implementation]", overcoming indifference or resistance that the intervention may provoke in an organization.
4	External Change Agents	Individuals who are affiliated with an outside entity who formally influence or facilitate intervention decisions in a desirable direction.
C	Executing	Carrying out or accomplishing the implementation according to plan.
D	Reflecting & Evaluating	Quantitative and qualitative feedback about the progress and quality of implementation accompanied with regular personal and team debriefing about progress and experience.

When the enablers and barriers were coded to the constructs of the 2009 CFIR, the CFIR-ERIC matching tool was used to identify implementation strategies drawn from the ERIC list of strategies. The CFIR-ERIC matching tool was downloaded from the dedicated CFIR website as a Microsoft Excel file: https://cfirguide.org/guide/RISOME_Query_Tool_Certificate.xlsm. This matching tool provides a prioritised list of strategies to consider based on knowledge of potential CFIR-based enablers and barriers. The list comprises 73 implementation strategies that were drawn from the Expert Recommendations for Implementing Change (ERIC) list of strategies including their definitions.[9] This list is accessible here. Strategies categorised as 'level 1 strategies' in the matching tool were selected for the digital tool as these strategies were endorsed by 50% of expert panel members of implementation scientists (n=169) as more likely to be effective in addressing the corresponding CFIR domains and constructs.[9]

So what does this mean for the digital tool?

We have coded the list of statements describing enablers and barriers to implementing national standards in step 1 to the 2009 CFIR and then used the CFIR-ERIC implementation matching tool to identify potentially appropriate implementation strategies. We have presented these strategies in step 4 alongside their definitions. Definitions have been amended so they are relevant to the implementation of national standards in an Irish context.

Table 6 presents a sample of the coding exercise, incorporating the CFIR, BCW and CFIR-ERIC Matching Tool, that informed steps 1-4 of the digital tool (phase 2 of SITAS).

Table 6: Example of the coding exercises informing steps 1-4 of SITAS

Enablers and Barriers to implementing national standards	CFIR± Domains	CFIR Construct	COM-B¥	BCW≠ Intervention function	ERIC** Implementation Strategies	Definitions of Implementation Strategies
There are accessible learning resources to increase awareness and knowledge of the standards.	Inner Setting	Access to Knowledge & Information	Psychological capability	Education, Training, Enablement Education (Increasing knowledge or understanding) Training (Imparting skills) Enablement (Increasing means/reducing barriers to increase capability (beyond education and training) or opportunity (beyond environmental restructuring))	Conduct educational meetings, Conduct ongoing training, Create a learning collaborative, Develop educational materials, Distribute educational materials.	Conduct educational meetings: Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and community, patient/consumer, and family stakeholders) to teach them about the clinical innovation. Create a learning collaborative: Facilitate the formation of groups of providers or provider organizations and foster a collaborative learning environment to improve implementation of the clinical innovation. Develop educational materials: Develop and format manuals, toolkits, and other supporting materials in ways that make it easier for stakeholders to learn about the innovation and for clinicians to learn how to deliver the clinical innovation. Distribute educational materials: Distribute educational materials (including guidelines, manuals, and toolkits) in person, by mail, and/or electronically.
There are internal monitoring and feedback processes in services to self-assess implementation of standards		Goals & Feedback	Reflective motivation	Education, Persuasion, Incentivisation, Coercion Education (Increasing knowledge or understanding), Persuasion (Using communication to induce positive or negative feelings or stimulate action, Incentivisation (Creating an expectation of reward, Coercion (Creating an expectation of punishment or cost).	Audit and provide feedback, Develop a formal implementation blueprint, Develop and implement tools for quality monitoring, Facilitate relay of clinical data to providers, Organise clinician implementation team meetings	Audit and provide feedback: Collect and summarize clinical performance data over a specified time period and give it to clinicians and administrators to monitor, evaluate, and modify provider behaviour. Develop a formal implementation blueprint: Develop a formal implementation blueprint that includes all goals and strategies. The blueprint should include the following: 1) aim/purpose of the implementation; 2) scope of the change (e.g., what organizational units are affected); 3) timeframe and milestones; and 4) appropriate performance/progress measures. Use and update this plan to guide the implementation effort over time. Facilitate relay of clinical data to providers: Provide as close to real-time data as possible about key measures of process/outcomes using integrated modes/channels of communication in a way that promotes use of the targeted innovation. Organise clinician implementation team meetings: Develop and support teams of clinicians who are implementing the innovation and give them protected time to reflect on the implementation effort, share lessons learned, and support one another's learning

±CFIR: Consolidated Framework for Implementation Research, ¥COM-B: Capability, Opportunity, Motivation-Behaviour, ≠BCW: Behaviour Change Wheel, **ERIC: Expert Recommendations for Implementing Change