

# DT Toolkit Collaborative Workshop guide

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This guide is designed to make it simple and easy for you and your organisation to run an inclusive, effective and engaging digital twin collaborative workshop. The objective of the workshop is to accelerate your digital twin journey by allowing you to take the insights and recommendations of the [DT toolkit](#) and co-create the foundations of your own DT business case.

To help you run a successful session, whether virtual, in-person or hybrid, the DT Hub has worked with Axis, a digital collaboration platform, to create three DT workshop templates. These templates are available at no cost and will help you run an effective, productive and inclusive session, which incorporates best practice facilitation techniques.

To use Axis, go to [www.getaxis.co](http://www.getaxis.co) and register for free. You will find the DT templates within the Template Library. There are no restrictions on these templates, you can have as many participants as you need.

[A workshop template](#) is also available on the DT Hub and gives an overview of the structure of the workshops.

# 1. Selecting the right template

Different organisations are at different stages in their DT journey. Which of the three templates is the right one for you?

	1. Start the journey	2. Drive impact	3. Scale value
<b>Context</b>	DTs are a new concept and organisational and information readiness is low but there is an emerging mandate to explore the potential of DTs e.g. regulatory, legal, or commercial change.	DTs are a well-understood concept across the organisation and are recognised as strategically important. The DT ambition is clear and there may already be DT pilots in flight.	The DT is up and running and driving value at scale from initial use cases. The organisation is aligned, and accountabilities are clear. The use case roadmap is defined with a compelling investment case.
<b>Objective</b>	Create a compelling ambition and define how to start the journey.	Define the scale use cases that will deliver rapid and material impact.	Reflect on progress made and agree how to accelerate and scale value including benefiting from the National Digital Twin Information Management Framework (IMF).

## 2. Getting ready

Workshop preparation is critical. The session needs to matter, with the necessary understanding, mandate and sponsorship for people to fully commit, through how they prepare, how they participate and how they take ownership of the output.

### 2.1 Alignment with wider context and strategy

Great workshops are grounded in the strategic context of the organisation and a burning platform for change. You need to find your DT burning platform and make it front and centre. For example:

- Business plan execution
- Regulatory or legal compliance
- Commercial threats and opportunities

Workshop participants need to understand how DT relates to the core organisational priorities that everyone has a stake in.

### 2.2 Getting the right sponsorship and inviting the right people

DT cuts across the organisation and takes material investment. It needs senior sponsorship that reflects its cross-organisational nature.

When choosing who to invite consider the following:

- Sufficient seniority to drive ownership and accountability
- Depth of content knowledge to generate specific ideas that are actionable
- Cross organisational representation to cover DT's multiple dimensions
- 10-25 participants are the sweet spot for workshop-based collaboration. Using Axis, it is possible to run successful large-scale collaboration sessions with 30-50 people.

## 2.3 Workshop design

A well-designed workshop creates alignment around detailed and specific ideas with decisions that stick and actions that are owned. Everyone should have their voice heard, group think should be avoided and time should be well used.

The DT Hub has spent a significant amount of time building the DT workshop templates. They are designed to be run over 120-180 minutes. The workshop objective, key question and activities are pre-packaged and ready to run. You can edit the objective and key question to better align with your specific circumstances.

The workshop template designs are shown below. Each workshop is made-up of four activities that flow from one to the next. Spend between 20-30 minutes on each activity.

<b>Workshop 1: Start the journey</b>	
1.	Ambitions – define ambitions aligned to digital twin. Collectively prioritise them and identify the key themes to help focus idea creation.
2.	Creative matrix (area & time horizon) – create an initial set of DT ideas against the themes generated from the ambitions. Structured by the DT toolkit areas and by time horizon. Ensure there is good coverage across dimensions.
3.	Dot voting and 2D matrix – prioritise the top ideas, take the top 7-15 to be evaluated on the 2D matrix to understand their relative return on investment and identify quick wins vs. more strategic moves.
4.	Action list – for the ideas to be taken forward define actions with owners and due dates to create accountability and execution momentum.

<b>Workshop 2: Drive impact</b>	
1.	Value drivers & strategic imperatives – define DT value drivers – how digital twin can create quantifiable value e.g. reduce maintenance spend – and strategic imperatives – how digital twin can enable the organisation's strategic imperatives e.g. regulatory compliance. Collectively prioritise them and identify the key themes to help focus idea creation.
2.	Creative matrix (source and area) – develop DT use case ideas against the themes generated in the previous stage. Structured by the DT toolkit areas and by data source. Ensure there is good coverage across dimensions.
3.	Dot voting and 2D matrix – prioritise the top ideas, take the top 7-15 to be evaluated on the 2D matrix to understand their relative return on investment and identify quick wins vs. more strategic moves.
4.	Action list – for the ideas to be taken forward define actions with owners and due dates to create accountability and execution momentum.

<b>Workshop 3. Scale value</b>	
1.	Rose thorn bud – roses are what is already working, thorns are barriers and buds are opportunities. Use the collective understanding of the as-is situation to generate themes that will help focus idea creation.
2.	Creative matrix (People Process Technology & Information Management Framework (IMF) and time horizon) - develop change ideas to enable DT scaling and value realisation against the themes generated in the previous stage. Structured by people, process, technology, and ideas specifically related to the IMF, to support thinking on how cross-organisation data sharing can be enabled. Ensure there is good coverage across dimensions.
3.	Dot voting and 2D matrix – prioritise the top ideas, take the top 7-15 to be evaluated on the 2D matrix to understand their relative return on investment and identify quick wins vs. more strategic moves.
4.	Action list – for the ideas to be taken forward define actions with owners and due dates to create accountability and execution momentum.

We would suggest that you do several trial runs of the Axis workshop template on your own or with one or two others to get fully comfortable with the approach, structure, and interface.

## 2.4 Pre-read materials and pre-session alignment

Ideally everyone should come to the session with a common understanding of the fundamentals:

- DT definition
- The burning platform or case for change
- Wider organisational context e.g. business plan or digital strategy

Relevant documentation should be included within a pre-read. We would also recommend issuing the [DT toolkit report](#) to get everyone up to speed and aligned.

Before the session, communicate the objective and key question, ideally from the session sponsor(s). Leadership can also set the expectation that the workshop outputs will be owned, with clear accountability for delivery.

## 3. Effective facilitation

On-the-day facilitation will help drive a successful session.

### 3.1 Context setting and creating a platform for action

The session sponsor(s) should set the context and establish a platform for action that clearly links to the key organisational priorities. The emphasis should be on how the workshop outputs will be used, why they matter and that individuals will be made accountable for taking them forward.

### 3.2 Roles and responsibilities

There are four potential roles in the workshop. It is possible to run successfully with one facilitator alone.

1. Session sponsor – sets the context and tone, drives sense of momentum and accountability. Will sponsor post-workshop execution. Make use of the sponsor (and other leaders) during the action list to create clarity of action ownership e.g. let them define who should own what.
2. Lead facilitator – drives the session to achieve the target outcome. Guides the activities and supports effective collaboration and discussion. Can ask basic questions to tease out areas of discussion and challenge people's thinking. Could be a DT and / or industry specialist or from another area or industry.
3. Support facilitator – helps ensure everyone is engaged and helps manage the mechanics of the session. Can be the person who runs Axis, allowing the lead facilitator to focus on driving the discussion.
4. Subject matter specialist – brings DT expertise into the process, provides insight and guidance without directing the outcome.

Ahead of the session the sponsor needs to be briefed and provided with the key messages they need to land. The lead and support facilitator should do a full rehearsal before the session, working through the activities and timings. Investing several hours to prepare and practice will pay dividends. You may choose an internal or external facilitator or subject matter specialist to support you with your session.



### **3.3 Introduction to Axis and the Axis approach**

Axis is designed to make it simple and easy to facilitate. Axis is a web-based platform, there is nothing to download.

The DT templates are configured and ready to go, you just need to click start. Once started present your screen and / or share over your video conferencing software. Participants use the QR code or link to log-in with their smart phone or tablet. They can also use their computer.

Axis provides a step-by-step facilitator workflow. As the facilitator clicks right the participant's devices will follow with clear instructions. All inputs are anonymous to stimulate creative and innovative thinking.

There is no write-up, just export the output into Excel.

## 4. Step-by-step guide to Axis

### 4.1 Select the right template and edit as required

Go to [getaxis.co](https://getaxis.co) and register for free. Within the template library filter on Digital Twin to see the three DT Hub workshop templates. Select the one you want to run based upon where you are on your digital twin journey.

This will take you to the workshop set-up screens where you can see how the template workshop is configured and can, if you want to, make changes. Firstly, look at the workshop objective and key question. Feel free to tailor them for your organisation and circumstances.

Next review the activities selected. These can be edited, and content can be pre-added. In this case, the first activity will be defining value drivers and strategic imperatives. Here you can pre-add drivers and imperatives and themes. This allows you to add inputs from people who cannot attend the session or things that are already well understood.

You can also edit the creative matrix by changing the rows and columns.

You can also change the number of votes each person will receive in dot voting.

Once you are happy with the design of your session you can view the unique joining information, which you can share with attendees ahead of the session and see the session summary.

Your session is ready to run. If you want, you can create a copy and do a trial run on your own to see how the session will work. If you want to make changes go back to the original and do them there.

### 4.2 Set-up and run the session on the day

#### 4.21 Getting started

To facilitate the workshop on the day, share your screen over your web conferencing platform and / or project your screen in the room and click to start the workshop.

People can join using their smart phone or any other device with a web browser. With a smart phone or tablet you can use the QR code through the camera or QR code reader. It is also possible to copy and paste the link into the video conference chat, so it is there if people need it. The unique workshop URL is always available at the bottom of the screen. You can see people joining on the left-hand side of your screen and the count of active participants.

As a facilitator it can be helpful to join the workshop on your own phone or tablet so you can look at the content being created as the session progresses. If the workshop is being run in person, people can get up and move about with their phone just like they would with a sticky note and pen. So, feel free at any point to split people into groups where one person could act as the scribe to capture ideas in Axis. To run the workshop just click right to move step-by-step through the workshop journey. Start by explaining the session objective and key question and explaining the activities that you will run. Then it is time to get into the first activity.

#### **4.22 How to collaborate with Axis**

For each activity there is a screen to explain what you are about to do and why. Then you get into the activity. Participants use their device to create content, vote, and score.

When participants are happy, they click to submit. And when they have finished putting in all their ideas or voting, they click they are done, which is visible to the facilitator allowing you to move on to the next step when everyone is finished.

Once everyone has put their ideas forward it is time to collectively review and refine what has been created individually. You can:

- filter and discard duplicates – they will be retained in the session write-up but won't progress to the next step - and edit content
- add new content
- filter content.

#### **4.23 Creating themes for DT idea creation**

In the first activity, once you have reviewed the results of the voting you move to theme setting, where the ideas are ranked on the left-hand side from most to least votes. This is a key part of the session for the facilitator. Based upon the collective prioritisation the objective is to identify the key themes that are emerging. These themes will flow through into idea creation providing structure and focus. At its simplest you might choose to convert the top 3-8 ideas. Eight is the maximum number of themes you can create, and we would recommend that five is a good number. Or you might note that several of the top voted drivers and imperatives are thematically similar and hence combine them.

By using the tick box, you can connect several to the same theme at the same time. If you want to remove an imperative or driver from a theme, then click the cross on the card. You can also move between themes.

Once the themes are set it is time to generate digital twin ideas.

#### **4.24 Creating DT ideas**

When creating ideas use the timer to five minutes to give people time and space to think. When creating an idea, participants need to select which theme it relates to and the dimensions of the creative matrix e.g. type and the data source as well as providing a name and description.

All the ideas created can then be viewed as a series of cards or in the matrix view. Use the matrix view to see where the ideas are clustered and where there are gaps. You can select ideas and can move where they sit on the matrix.

You can filter ideas by themes and dimensions on the matrix.

You can also group ideas. Any idea can belong to as many groups as you want, which can allow you to capture ideas that cut across multiple dimensions.

Ideas can be discarded and edited by the facilitator. And you can add new ideas.

#### **4.25 Evaluating the ideas**

Once you are happy with the ideas it is time to move to dot voting to see which ones you want to take forward.

Dot voting allows you to select the top 5-15 ideas for further collective analysis via a vote across two dimensions (effort / value):

The dot on the 2D matrix for each initiative is the average of everyone's score and if you click on it you can see all the individual scores to understand the level of alignment.

You can also filter by theme and group to focus the discussion.

Once you have decided which ideas you want to take forward into execution it is time to create actions.

#### **4.26 Creating actions and downloading the output**

The action section is led by the facilitator. You can create as many actions as you want for each idea with owners and due dates. Move through each idea one after the other.

With the workshop complete you can now export the output into Excel ready to share. If you want to do the workshop over two individual sessions, you can stop and resume at any time.

## 4.3 Techniques to drive a productive and inclusive process and to get decisions that stick

Below are a series of best practice tips.

The tip	How to do it
Consider using DT toolkit content to kick-off the workshop.	The <a href="#">DT toolkit</a> has lots of great content that can help set the context for the session. Consider taking 10-15 minutes upfront to present the toolkit DT definition and / or use cases and <a href="#">case studies</a> .
Consider pre-adding content ahead of the workshop e.g. if you know that legal compliance is a critical theme or strategic imperative then add it ahead of the workshop.	In Axis when setting-up the workshop you have the option to pre-add content in the configuration screens. This could be adding an ambition, value driver etc. depending upon which of the three workshops you are running. You can also pre-add themes.  See also <a href="#">Select the right template and edit as required</a>
<p>Explain the key elements of the Axis collaboration approach up front:</p> <ol style="list-style-type: none"> <li>1. Anonymous input to support innovation and challenge</li> <li>2. Dual screens – Axis turns your smart phone into a digital sticky note</li> <li>3. Digital capture – everything submitted is captured so nothing will be lost</li> </ol>	<p>Emphasise the importance of anonymity upfront on the welcome screen. Mention that Axis does not capture who enters what. It is a fundamentally anonymous process.</p> <p>Make it clear to participants that Axis uses two screens: the screen shared by the facilitator, which provides guidance and visualises the collective outputs and the participant smart phone or tablet screen which operates as a digital sticky note. Note that participants can participate through their computer if they do not have a smart phone or tablet available.</p> <p>Emphasise the importance of capturing detailed and specific content that could be understood by someone who was not at the workshop. This will ensure that everyone is clear on what is being agreed and that the output is actionable.</p>
Spend time explaining the journey and use the intermediary screens between activities.	<p>It is critical that everyone understands what they need to do throughout the workshop and why. Spend 4-5 minutes on the Axis journey screen at the start so everyone is clear on what activities they will be doing and how one activity flows into the next.</p> <p>As you enter each activity there is a transition screen, which re-iterates the key question and explains the activity. Spend 60-90 seconds ensuring everyone is clear on what they are about to do and why.</p>

The tip	How to do it
Make use of the Axis timer to help structure the flow and provide time and space to think with moments of timed silence.	<p>The Axis timer is available at the top right of the screen and can be used at any point during the session.</p> <p>For example, provide five minutes at the start of each activity for people to silently think and capture their ideas. Then provide 2-5 minutes (depending on the amount of content generated) for everyone to read and digest the ideas of others. With this done ask if people have any clarifying questions on anything they have read and then enter free-form discussion.</p>
During the first activity drive a focus on the 'why.'	<p>The first activity whether 'Ambitions' or 'Value drivers and strategic imperatives' is about understanding the 'why.' You don't want the content created to get into the specifics of the 'what' or the 'how' e.g. particular use cases or specific technology development. Explain that this comes later.</p>
Use theme setting at the end of the first activity to provide structure for idea creation and to pull out the common threads.	<p>The first activity whether 'Ambitions', 'Value drivers and strategic imperatives' or 'Rose Thorn Bud' is all about unpacking the context. The output, which will flow into the idea creation activity is 5-8 themes, which capture the key insights and thinking.</p> <p>Theme setter is the step that takes place after seeing the results of the vote. The 'Ambitions' for example will be ranked from highest to lowest votes.</p> <p>You can drag them over to the right to create new themes. A theme could be a straight copy of a single high ranked 'Ambition' or it could be a consolidate of multiple 'Ambitions' that are thematically connected.</p> <p>A good starting point is to simply take the top 5 and convert them to themes and then see if the next 5 in the ranking can be mapped to the same 5 or if new or consolidated themes arise.</p> <p>This is a key process and is worthy of 5-10 minutes of discussion and refinement.</p> <p>See also <a href="#">Creating themes for DT idea creation</a></p>

The tip	How to do it
Explain the voting process so everyone is clear on how it works.	<p>Dot voting is a secret ballot process that is immune to group think. You can edit the number of votes each participant will have when you set-up the workshop. Between 5-10 is recommended.</p> <p>When using voting and scoring give 2-5 minutes depending upon the number of items to score (the rule of thumb is a minute for every 10 items).</p> <p>Make it clear with dot voting that the participant can use one or all their votes on any given idea. Also suggest that they read all the ideas and scroll down to the bottom of the list before starting to cast their votes. Make clear that they can vote for their own ideas if they so wish.</p> <p>Finally, make clear that the vote is directional, all ideas are captured and will be available post the workshop.</p> <p>See also <a href="#">Evaluating the ideas</a></p>
Group and consolidate duplicate ideas whilst reviewing the creative matrix outputs.	Whilst participants are silently reviewing all the ideas, as a facilitator spend the time to identify duplicate ideas. Group them to maintain traceability and then discard all but one.
Don't try and discuss every idea, you will run out of time. Instead ask if anyone wants to discuss or build on a particular idea to discuss by exception	It is not unusual to generate 50+ ideas. You cannot discuss them all, so use the collective wisdom of the group to flag the ones they think need discussion. Make clear this is not an opportunity for people to 'sell' their idea. Any discussion should be to clarify or build the collective thinking.
Use the creative matrix visualisation to see where the ideas are distributed and where there are gaps.	<p>The creative matrix has two tabs: Ideas and Matrix. The Matrix view allows you to see the distribution of ideas across the matrix. This can help stimulate a useful discussion and provides the opportunity to close gaps.</p> <p>After the initial independent generation of ideas, go to the Matrix view and get people to reflect on the distribution of ideas. Potentially provide another 3-5 minutes to close gaps.</p> <p>See also <a href="#">Creating DT ideas</a></p>
Emphasis on action and accountability	During the action list activity use the sponsor to help allocate owners to actions to drive clarity of accountability.

## 5. Post workshop impact: disseminating the outputs and driving momentum

Issue the outputs that day to provide an immediate sense of pace and momentum. Focused on the actions and owners, the workshop output is there to help the action owners execute their actions.

The ideas generated during the workshop can provide an initial prioritised backlog for DT that can be refined and managed on an enduring basis.

The outputs will help drive the building of a business case:

1. Start the journey	2. Drive impact	3. Scale value
Overarching and indicative to justify initial investment in a DT pilot and / or mobilisation of a DT team.	Individual DT use cases and 'fixed' cost to scale DT foundations. Includes use cases that share information within sector and across sectors under the Information Management Framework (IMF).	Investment in enabling people, process and technology transformation including implementing IMF and sharing data across organisations.

It is important to note that the ideas identified and prioritised during the workshop can be grouped to reflect potential synergies and / or logical sequencing where one idea builds upon another. This is a key post-workshop activity.



## Version Control

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