

Strategic Roadmap

Issue: April 2023

The buildingSMART Context



More sustainable, less expensive buildings & infrastructure...

...through optimized decision-making & automation efficiencies...

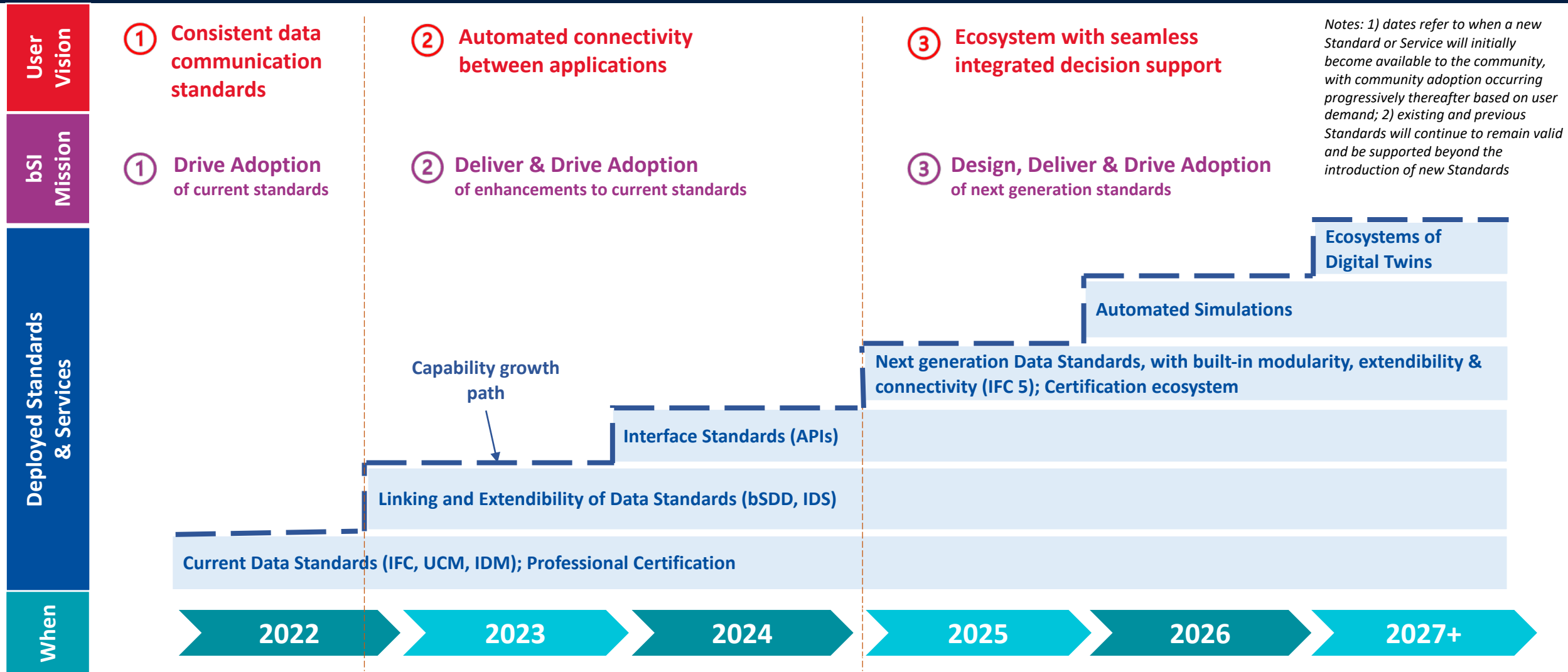
...enabled by data fusion via open digital Standards & Services...

...created by the buildingSMART community.

buildingSMART Strategic Roadmap – Vision

PHASE		USE	IMPROVE	REINVENT
User Vision		① Consistent data communication standards	② Automated connectivity between applications	③ Ecosystem with seamless integrated decision support
Business Outcome	...resulting in	Improved data integration in design, construction and asset management reduces risk and rework, saving time and cost	Enhanced analysis allows better decision-making on design, construction and asset management trade-offs, improving time, cost and quality	Intelligent design, construction and asset management ecosystem allows optimisation of decision making across the asset lifecycle, improving time, cost and quality
External Audience	...leading to...	openBIM workflows enable rule-checking and interoperability between applications, helping data integration during design, construction, asset management & decommissioning	Standards, services and software applications are connected, allowing design, construction and asset management predictions through automated simulations	An open and automated, seamless, intelligent ecosystem, allowing semi-automated design and decision-making, spanning different systems and all lifecycle phases
Internal Audience	what we need to create...	Common data exchanges enable interoperability between applications, model federation and digital workflows (e.g. via rule checking)	Connected applications enable process automation, simulations, automated checking & decision support (e.g. automated scheduling, lifecycle costings, code compliance, manufacturing engineering, energy modelling)	Integrated processes with linked data and predictive analytics enable support for intelligent digital twin ecosystems (e.g. automatic predictions of design/engineering changes through connected simulations)

buildingSMART Strategic Roadmap – Summary



buildingSMART Strategic Roadmap – User Adoption Balance

Representation of relative levels of user adoption across industry

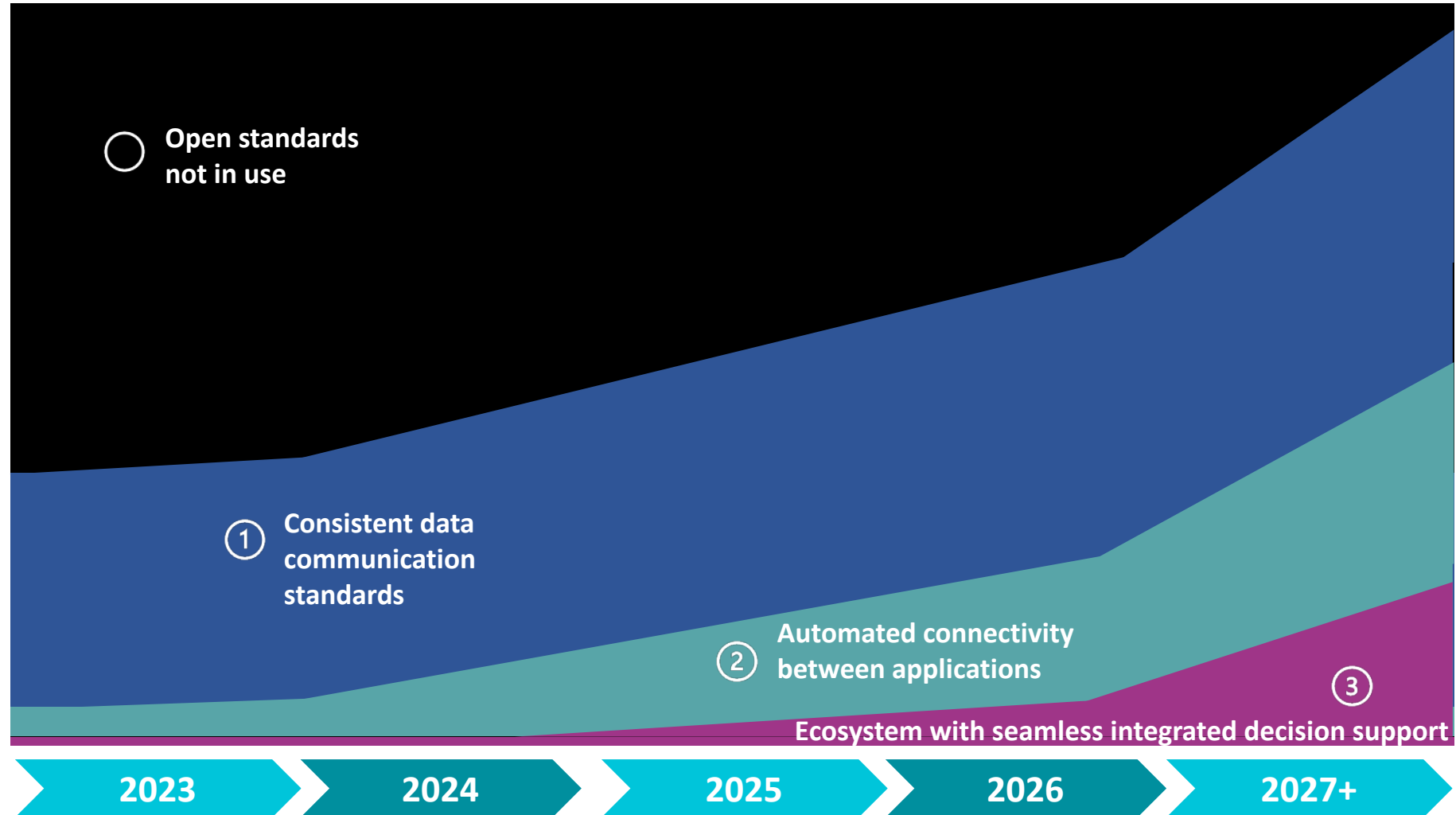
Open Standard adoption is not yet the norm across industry



The bulk of adoption uses historical Standards without advanced features



Use of improved Standards is low but will grow



buildingSMART Strategic Roadmap – Community Effort

Representation of relative levels of effort within buildingSMART community

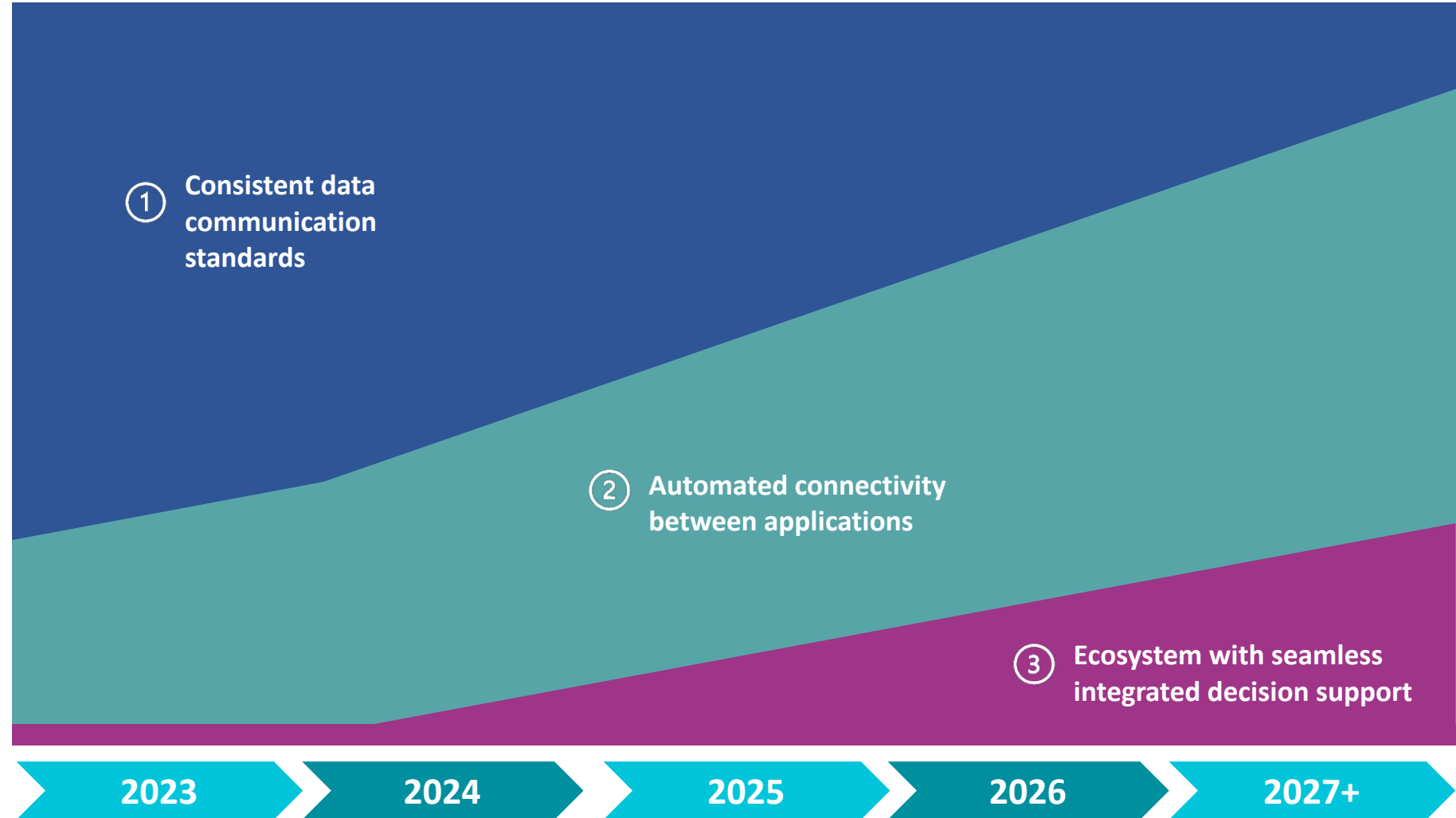
The main effort across the buildingSMART community remains on the adoption of existing standards (education, advocacy, etc)



A growing effort is focused on finalizing & rolling out improvements to these standards



A small portion of the community is designing & developing future generations of standards



① Consistent data communication standards

② Automated connectivity between applications

③ Ecosystem with seamless integrated decision support

2023

2024

2025

2026

2027+

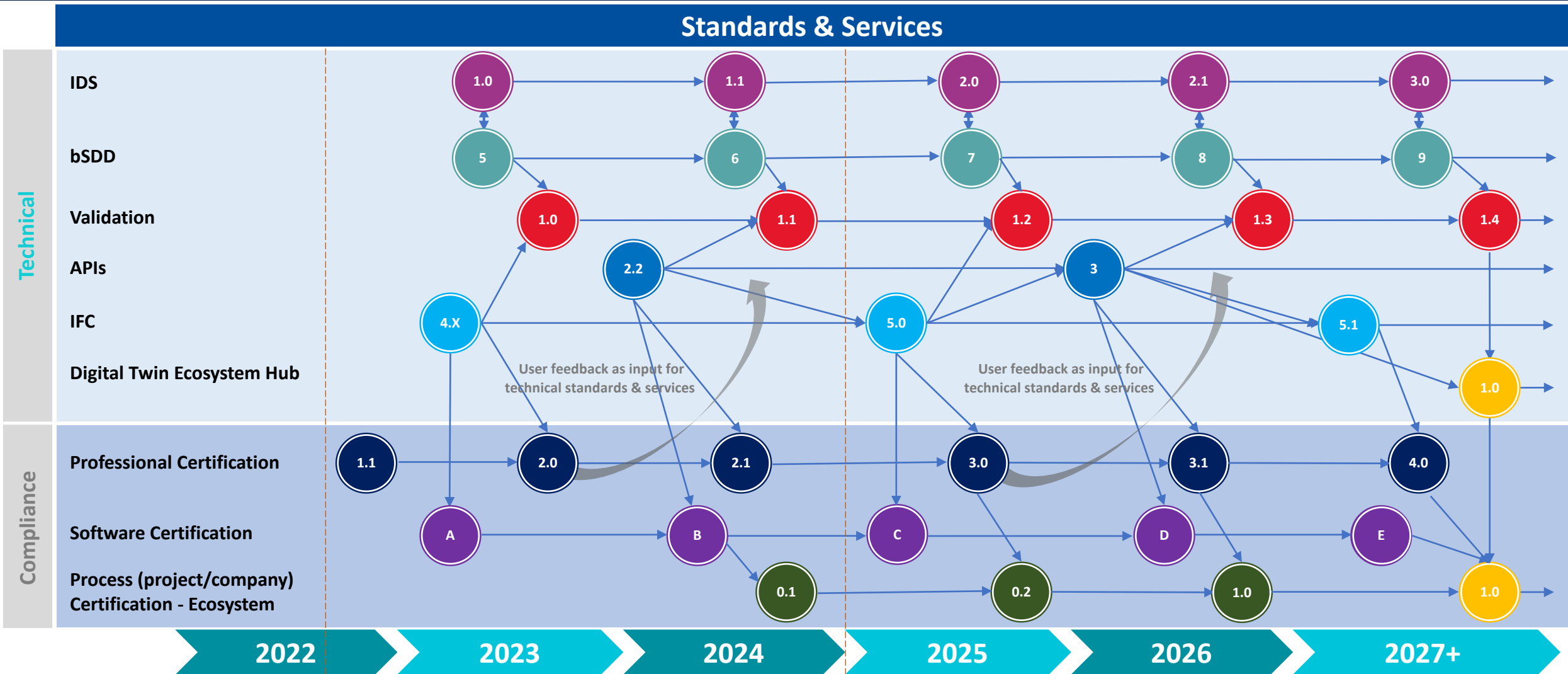
buildingSMART Strategic Roadmap – Standards & Services

	Vision	bSI Mission	Standards & Services	
Current Data Standards	Deliver consistent data communication standards	Drive adoption by making IFC easier & more reliable to use	Compliance	Technical Normalise IFC 4.x versions; MVD Policy; review UCM Service strategy; provide IFC validation service; create standard implementation levels for vendors
				Professional Certification 1.1 (create clarity on terminology & mission, introduction of levels & profiles)
Linking and Extensibility of Data Standards	Allow linking & extending of data standards	Create linked data services & a standard to define data requirements	Compliance	Technical Creation of Information Delivery Specification (IDS) standard; deployment of buildingSMART Data Dictionary (bSDD) as linked data platform
				Professional Certification 2.0 (how to setup your ecosystem to automate workflows, with framework of levels and profiles & full integration of bSI standards & solutions IFC, IDS & bSDD); metrics for software support of IFC to provide capabilities insights; bSDD data verification
Interface Standards	Automate the connection between (online) software applications	Create a set of standard 'Application Programming Interfaces' (APIs)	Compliance	Technical Integrated set of APIs for different use-cases (Foundation API, Document API, BCF API, Properties API, Dictionary API) Software Certification for API support; Process Certification 0.1 (Accelerated Projects (guidelines) / Company Certification)
Deployment Timeframe				2022
				2023
				2024
				2025

buildingSMART Strategic Roadmap – Standards & Services

	Vision	bSI Mission	Standards & Services	
Next generation Data Standards	Support advanced use-cases like only sending changesets of data, live connections to data, etc.	Make IFC leaner & lower the threshold for use	Compliance Technical	IFC 5 (with integrated modularisation, extensibility & APIs)
				Professional Certification 3.0 (how to build & manage Digital Twins); Process Certification 0.2 (Accelerated Projects (guidelines) / Company Certification)
Automated Simulations	Start a chain of simulations by sending data; get integrated predictions of design performance back within minutes	Allow linking & orchestration of simulations, with aggregated results	Compliance Technical	To explore – potentially hosting a registry of (online) services, advancing result classification, advanced APIs & more
				Process Certification 1.0 (Accelerated Projects (guidelines) / Company Certification)
Ecosystems of Digital Twins	Have the ability to intervene in the physical world, based on predictions from the virtual world	To explore	Compliance Technical	To explore – providing verified and reliable training data for machine learning algorithms To explore – complete Compliance Ecosystem: Individuals, Project, Companies, Data & Software Certification
Deployment Timeframe				<div style="display: flex; justify-content: space-around;"> <div style="background-color: #00A0C0; color: white; padding: 5px; text-align: center;">2025</div> <div style="background-color: #00A0C0; color: white; padding: 5px; text-align: center;">2026</div> <div style="background-color: #00A0C0; color: white; padding: 5px; text-align: center;">2027</div> <div style="background-color: #00A0C0; color: white; padding: 5px; text-align: center;">2028+</div> </div>

buildingSMART Strategic Roadmap – Milestones & Dependencies



Thank you

Main Website: www.buildingSMART.org

Professional Certification: <https://education.buildingsmart.org/>

Software Certification: <https://www.buildingsmart.org/compliance/software-certification/>

Forum: <https://forums.buildingsmart.org/>

bSDD: <https://www.buildingsmart.org/users/services/buildingsmart-data-dictionary/>

Knowledge Base: <https://www.buildingsmart.org/users/user-guides/>



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