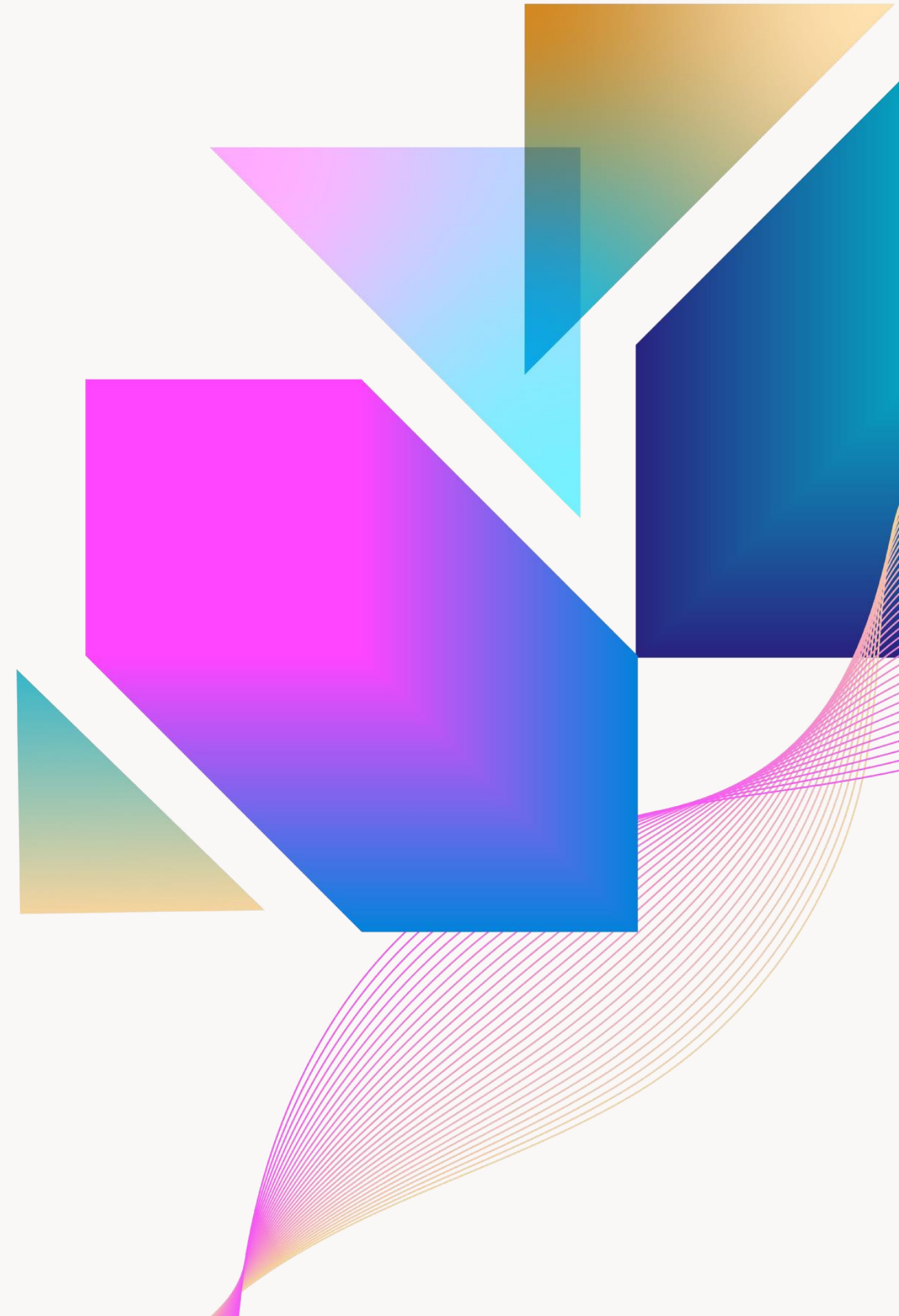


UNBOUND 

Innovating at Scale

Arcadis' Journey with Bluebeam

Maria Angeline Kisses H. Montes



Agenda

01 Welcome & Introduction

02 The Need for Innovation

03 Integration Journey

04 Driving Quality Through Collaboration Data

05 Persona-Based Tool Sets and Customization

06 Regional Success Stories

07 Outcomes & Outlook

Introducing Arcadis' Innovation Journey

How a global infrastructure leader embraced digital transformation to enhance collaboration



The Need for Innovation

Adapting to a New Reality: Remote Collaboration in a Global Design

Pre-Pandemic



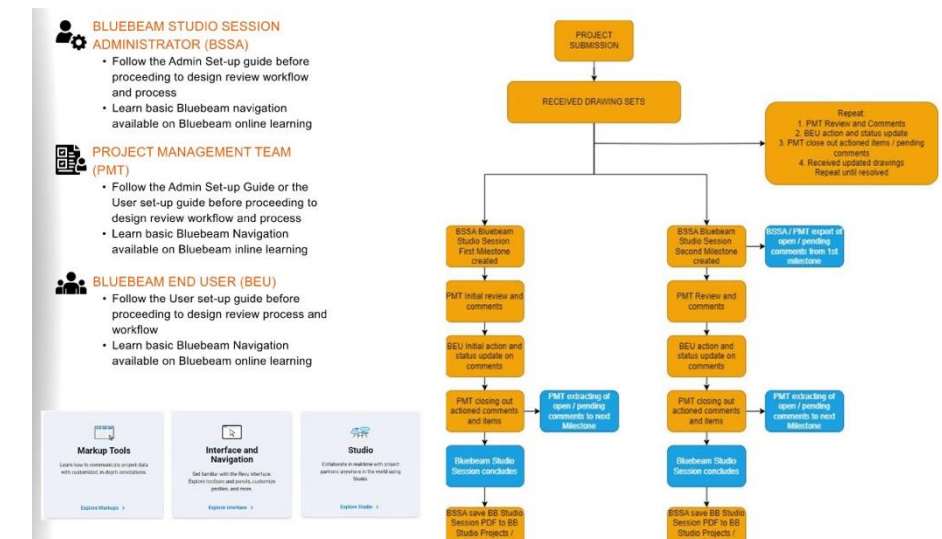
Design review were manual and email exchange
Shared between teams via inboxes
Familiar Set-up

Pandemic Onset



Remote work became common
Need better way to collaborate
Global need

Bluebeam Adoption

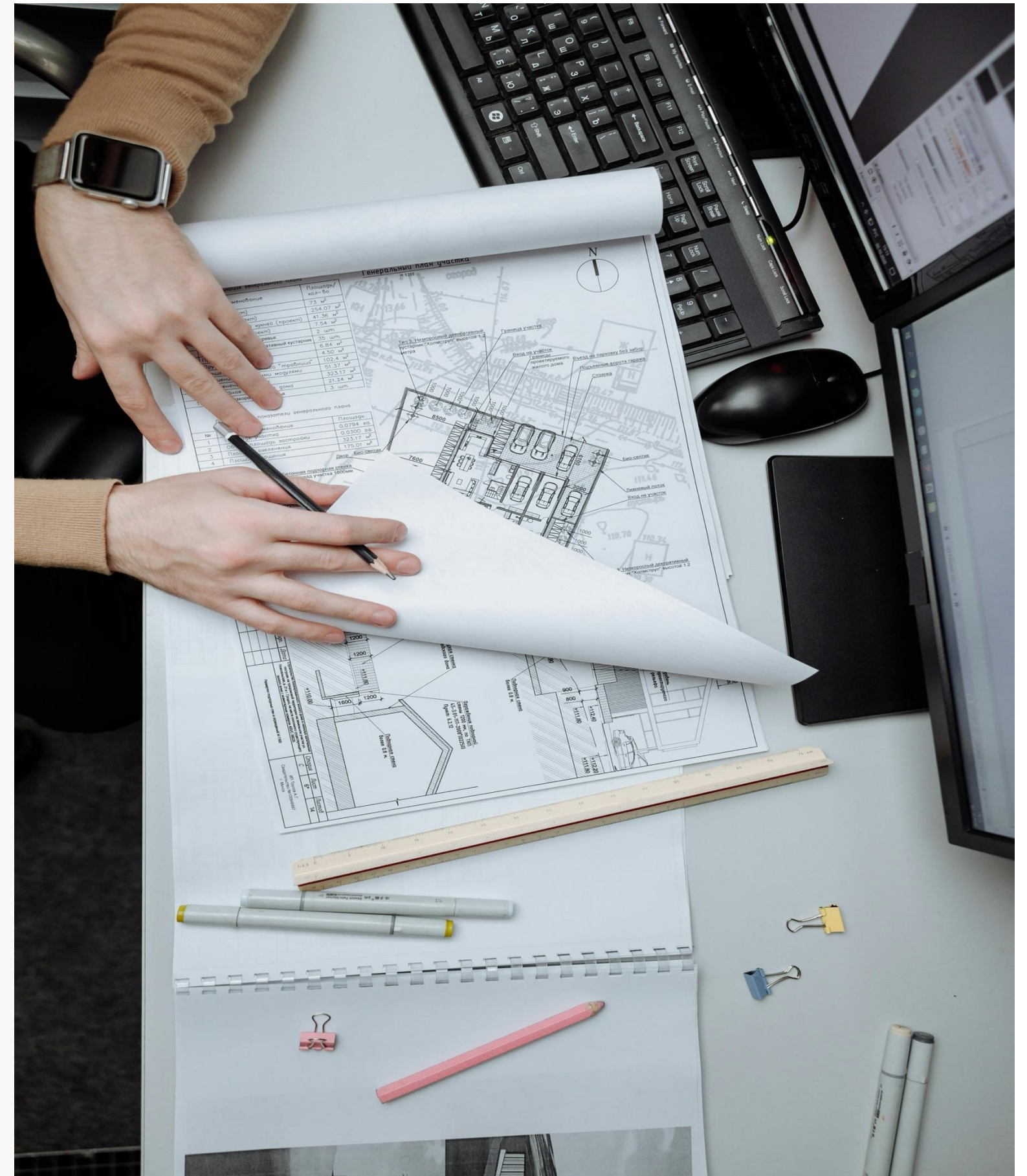


Bluebeam focus
New platform
Enhance team collaborate

The Need for Innovation

Pre-Pandemic

- Manual Review Setup
 - Email-based markups between lead office and GEC's
 - Multiple drawing version circulated
 - Challenge on aligning feedback and consistency
- Tracking Challenges
 - Progress tracked via highlights and tick boxes
 - Reviewers used different markup styles
 - No shared format for comments
 - Extra coordination needed to consolidate feedback
- Visibility & Alignment
 - Limited visibility across teams
 - Challenge to keep everyone at sync during reviews
- Need for Change
 - Need for a scalable, consistent review process



The Need for Innovation

Pandemic Onset

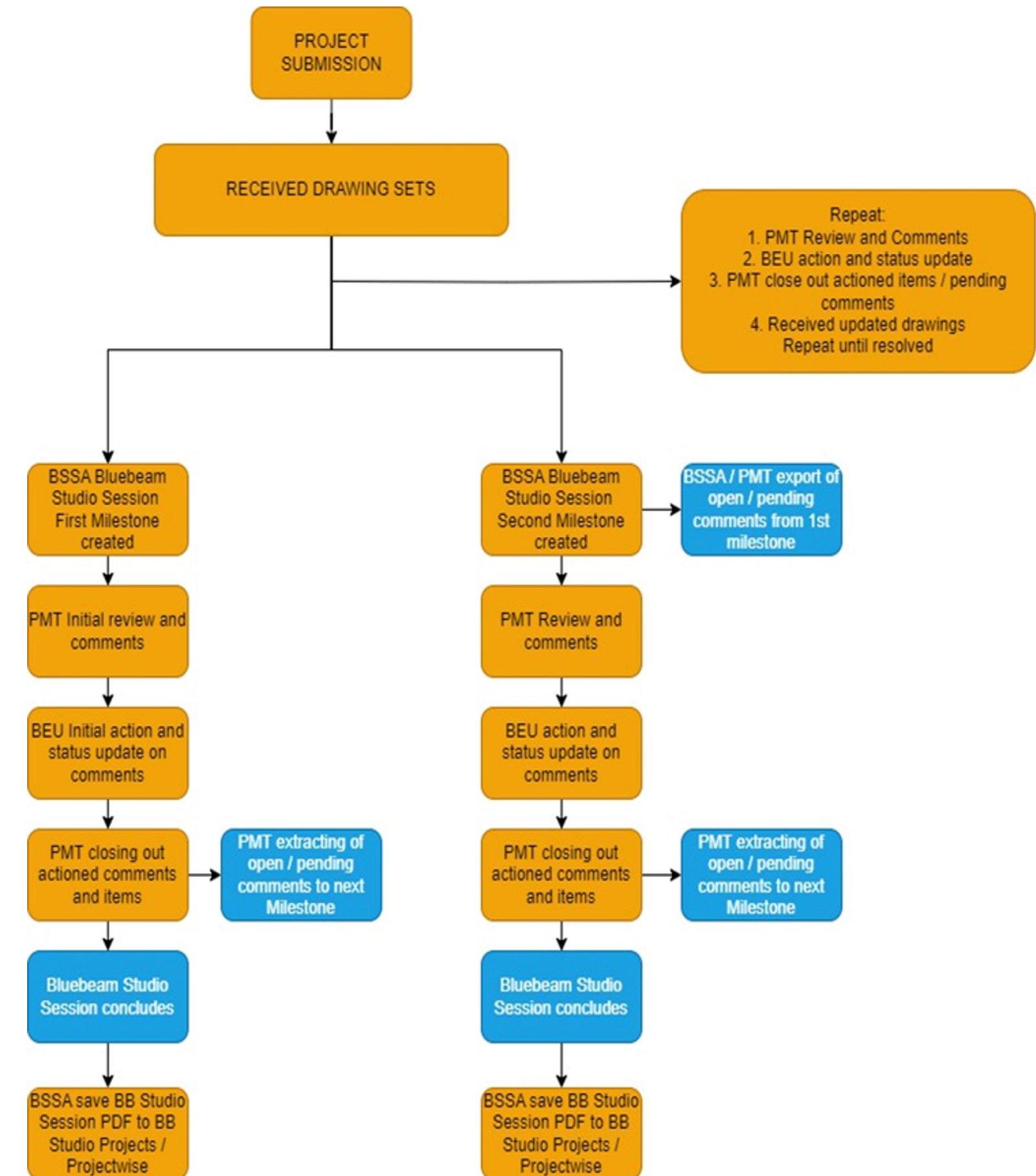
- Adapting to remote work
 - Pandemic shifted how we worked
 - Remote teams faced access issues
 - Shared drives and physical drawing is not practical
- Old Setup
 - Printed markups and local servers
 - Continued using email for markups
 - Time zone difference added challenge
- Coordination Challenges
 - Needed attention to detail
 - Tracking version became important
 - No real-time change tracking
 - Syncing updates required extra effort
- Exploring Solutions
 - Evolving needs
 - Time for a connected, collaborative platform



The Need for Innovation

Bluebeam Adoption

- Opportunity for Improvement
 - Unified, structured collaboration
 - Clarity, consistency, real-time visibility
- Exploring Bluebeam Revu
 - Real-time collaboration
 - Single source of truth
 - Scalable across region
- Strategic Rollout
 - More than software, needed strategy and planning
 - Shared commitment across organization
- Collaboration shift
 - Intuitive, consistent and efficient
 - Works across locations and project types



Integration Journey

Phase 1 : Laying the Groundwork

- Understand our users
 - Ran a survey
 - Assessed familiarity
 - Tailored support based on result
- Learning Path and resources
 - Created custom learning framework using official materials
- Visual Consistency
 - Customized line styles and hatches from CAD Software
 - Ensured consistent drawing presentation
- Clear Roles
 - Developed a responsibility matrix
 - Mapped task to team functions
- Clarity and structure
- Teams equipped with tools and guidance from the start.

Learning Path (Indicative learning Path based on Discipline)

		Civil Structures		Rail				Highways				Geotech
		Drafter/ Modeller	Engineer	O/H	Track Design	Signalling	Civil Design	Road Design	Pavement	Drainage	Utilities	BH
Basic	Interface + Navigator	•	•	•	•	•	•	•	•	•	•	•
	Markup tool	•	•	•	•	•	•	•	•	•	•	•
Intermediate	Markup List	•	•	•	•	•	•	•	•	•	•	•
	Studio Workflows	•	•	•	•	•	•	•	•	•	•	•
Advanced	Editing Documents	•	•	•	•	•	•	•	•	•	•	•
	Working with Measurements	•	•	•	•	•	•	•	•	•	•	•
	Drawing Management	•	•	•	•	•	•	•	•	•	•	•
	Document Processing	•	•	•	•	•	•	•	•	•	•	•
	PDF Forms	•	•	•	•	•	•	•	•	•	•	•
Expert	Document Security	•	•	•	•	•	•	•	•	•	•	•
	3D PDF's	•	•	•	•	•	•	•	•	•	•	•
	Plugins and Admin Tools	•	•	•	•	•	•	•	•	•	•	•

Integration Journey

Phase 2: Building Awareness and Community

Centralized Access

All Bluebeam resources placed on Arcadis SharePoint

Includes learning paths, toolsets, workflow and training materials

Accessible anytime, anywhere for all teams

MS Team Channel

Dedicated channel launched for Bluebeam updates

Real-time space for peer support, questions and feedback

Encouraged sharing of best practices across teams.

Lunch and Learn

Casual interactive sessions to introduce Bluebeam

Helped new users get comfortable with the platform

Shared early wins and practical tips

Community Building

Focused on connection and collaboration

Created spaces for learning and sharing

Helped Bluebeam Revu become a shared experience, not just a tool.

Integration Journey

Phase 3: Testing and Scaling

Pilot Testing

Started with a small internal project

Focused on markups and workflow testing

Safe space to refine configurations and tool sets

Scaling Up

Moved to a large, complex project

Used persona-based customization

Tailored profiles and tool chests by role and discipline

Showed Bluebeam's adaptability and consistency

Project Manager Engagement

Collaborated with PMs and key stakeholders

Demonstrated how Bluebeam supports delivery and traceability

Gathered input to fine-tune tools and workflows

Proving

Validated Bluebeam in real-world scenarios

Built confidence for full implementation

Built confidence for full implementation

Integration Journey

Phase 4: Standardizing for Global use

Global Standard

Gather best practices from different regions

Developed a standardized configuration and preferences set for Bluebeam Revu.

Balanced consistency with project flexibility

Landing Page

Centralized hub on **Arcadis SharePoint**

Includes setup guides, workflows, training materials

Includes setup guides, workflows, training materials

Start-up Menu

Custom menu launches with Bluebeam

Quick access to templates, tool sets, help links

Supports alignment and ease of use

Regional / Department Champions

Identifying **Bluebeam champions** across teams

Champions act as local experts and support adoption

Part of long-term strategy for global rollout

Driving Quality Through Collaboration Data

Leveraging Studio Sessions and Markup Data for Smarter Reviews

Bluebeam Studio Session

Used as central platform for real-time design reviews

- Set up using standard profiles
- All participants use standard display name
- Markups are tracked live.
- Markup List Summary Report is generated to document all actions taken.

Power BI

Used to transform markup data into actionable insights

- Markup data is exported from Bluebeam
- Dashboards visualize review metrics such as:
 - Number of markups per discipline
 - Status distribution
 - Review turnaround times

Power Automate

Used to streamline report distribution and tracking

- Markup summary reports are uploaded to a SharePoint folder
- Reduced manual effort.
- A Power Automate flow trigger:
 - Notification to relevant stakeholders
 - Transferring data to comment register template.

Driving Quality Through Collaboration Data

Studio Sessions

User Setup Guides:

- Installing Bluebeam Revu
- Creating a Bluebeam Studio account
- Modifying and applying **standard display names**
- Updating **standard preferences**
- Applying **standard configurations** (profiles, toolchest, statuses)
- Instructions on how to **join a Studio Session**

Admin Setup Guides:

- All user setup steps
- How to **create a Studio Session**
- How to **prepare PDFs properly** for review (flattening, naming conventions, page labels, etc.)

ARCADIS



BLUEBEAM
USER SET-UP
GUIDE

ARCADIS



BLUEBEAM
ADMIN SET-UP
GUIDE



BLUEBEAM USER SET-UP GUIDE

Process on setting up
Bluebeam prior on joining
Studio Session



BLUEBEAM ADMIN SET-UP GUIDE

Process on setting up
Bluebeam prior on
creating Studio Session

Driving Quality Through Collaboration Data

Power BI

- Piloted Power BI integration on the *100% Detailed Design* project
- Exported Bluebeam markup data into Excel, then import to Power BI
- Visualized comment status (open/closed), priority, and classification
- Tracked review progress and discipline involvement
- Enabled faster issue identification and resolution
- Provided clear insights for project leads and reviewers



Driving Quality Through Collaboration Data

Power Automate

- Piloted on Perth
- Markup List exported from Bluebeam as **XML file**
- XML uploaded to a structured **SharePoint folder**
- **Power Automate workflow** reads XML and populates the project's **comment register**
- Automatically sends **email notifications** to stakeholders
- Reduces manual data entry and improves traceability
- Ensures timely and consistent review documentation

agementServices

+ New Upload Edit in grid view Share Sync Copy link Add shortcut to OneDrive Download

utputs > BBCommentExport

Name	Modified	Modified By	TriggerFlow	FileTy
100% CDR_AAP-23919-DRG-COMBINED 30-01-2025.xml	January 29	Montes, Kissen	Publish Excel	.xml
100% CDR_ASP Stage 2 Specification30-01-2025.xml	January 30	Montes, Kissen	Publish Excel	.xml
100% CDR_ASP - Stage 2 Design Report 30-01-20252.xml	January 29	Montes, Kissen	Publish Excel	.xml
100% IV_AAP-23919-DRG-COMBINED 30-01-2025.xml	January 29	Montes, Kissen	Publish Excel	.xml
100% IV-ASP - Stage 2 Design Report 30-01-2025.xml	January 29	Montes, Kissen	Publish Excel	.xml
39021-QM-ITP-083.003.xml	January 18, 2024	Tay, Bryan	Publish Excel	.xml
60% CDR Set TD.xml	November 27, 2024	Tay, Bryan	Publish Excel	.xml
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AAP-23919-RPT-CIV-0001_A_CDR TD.xml	November 27, 2024	Tay, Bryan	Publish Excel	.xml
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GEHBI-GCA-DRG-5420-BR-00120_V3 22-11-2023.xml	January 17, 2024	Tay, Bryan	Publish Excel	.xml
Markup Summary 24-01-2025.xml	January 23	Montes, Kissen	Publish Excel	.xml
TEA-00-DE-0000-PLN-0001_Digital Engineering Plan_Draft.xml	March 28	Tay, Bryan	Publish Excel	.xml

Persona-Based Customization

Flexible, Focused and Global

- Standardized toolsets and configurations for consistency
- Flexible setup tailored to each project's unique requirements
- Guided rollout using user/admin setup guides
- Quick training for Studio Session creators
- Used successfully in Sydney, Perth, and the US
- Toolsets with preloaded metadata for efficient markups

STEP 4 : BLUEBEAM CONFIGURATIONS

Double click the icon below to automatically load the custom configuration

Bluebeam Setup is done only once

PROJECT PROFILE



Custom columns,
status and Tool
Sets

User interface

TOOL CHEST



Customized
markups

May vary
depending on
project
requirements

CUSTOM COLUMNS



The data
displayed in the
markup list -
columns

may vary
depending on
project
requirements

Regional Success

Expanding Impact Across Borders

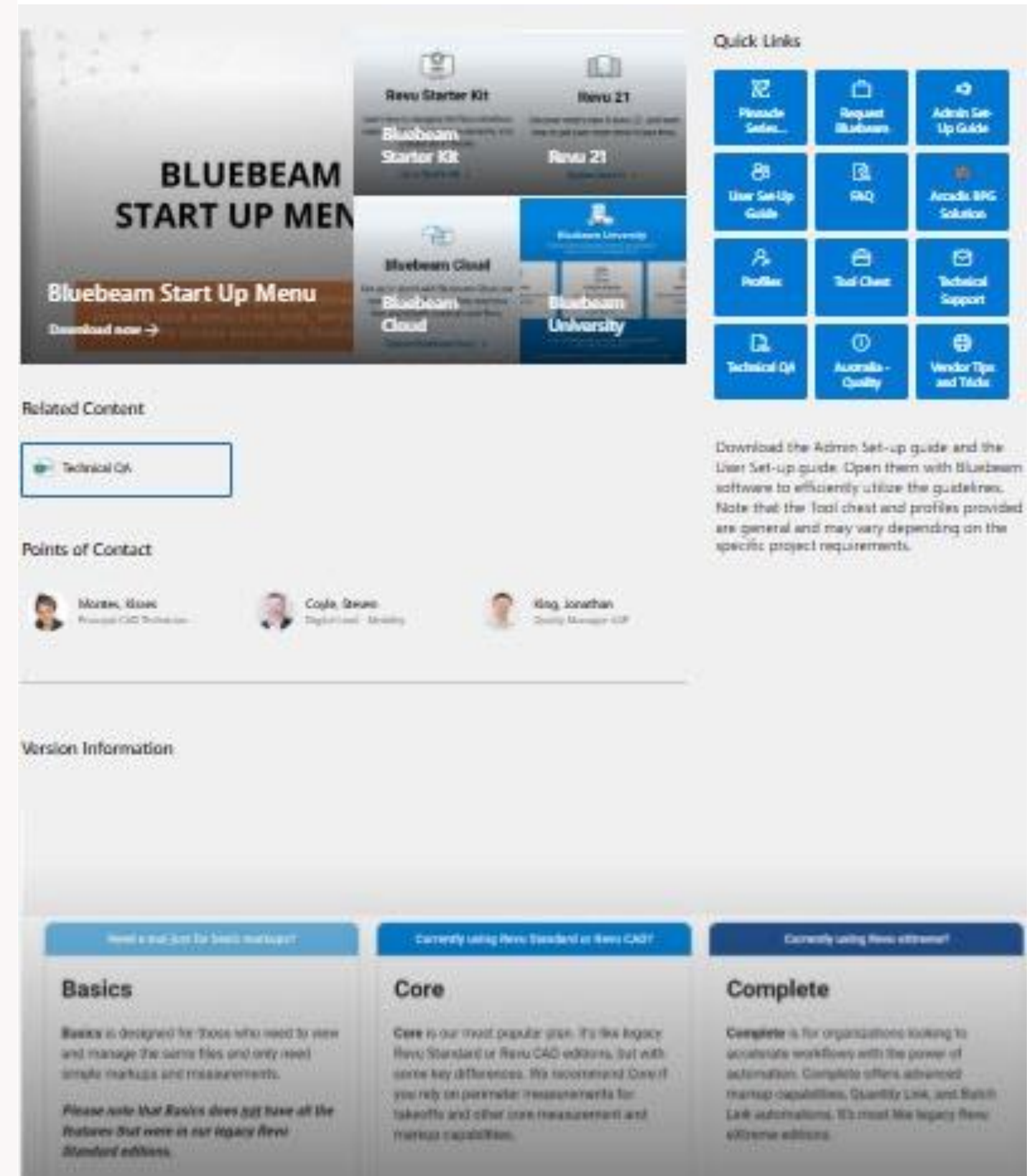
- Started with successful implementations in Australia (Sydney & Perth)
- Now supporting US projects with 6 training sessions delivered
- Project Managers proactively requesting setup support
- Bluebeam now included in new project proposals
- Demonstrates trust, scalability, and strategic value




Outcomes & Outlook

Driving Measurable Impact and Shaping What's Next

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- Now supporting US projects with 6 training sessions delivered
- Project Managers proactively requesting setup support
- Bluebeam now included in new project proposals
- Demonstrates trust, scalability, and strategic value





“ Innovation is not about having the best ideas. It’s about making ideas work consistently, collaboratively and at scale

Kisses Montes

Principal CAD Tech, ARCADIS

Kisses Montes
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