



# Project Finance Platform for Streamlining Renewable Energy Deals

Unlocking Operational Scalability and Increasing Deal  
Velocity with SaaS Solutions

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# Executive Summary

**In a dynamic and continuously evolving investing landscape, quickly adapting to market changes and capitalizing on new opportunities is a powerful competitive advantage. Efficiency, flexibility, and accuracy are all critical for growing and managing portfolios that achieve solid returns and minimize risks.**

The global sustainable infrastructure investment market is predicted to grow significantly over the next decade. Moreover, the market is evolving beyond large-scale financial instruments, including increasing volumes of mid-tier green infrastructure loans. However, the industry's dependence on siloed, antiquated systems and manual workflows prevents it from cost-effectively bringing capital to these new opportunities.

Key market barriers include:

- **Manual and duplicate system inputs.** Data input and approval setup must be done for multiple systems, which creates redundant work and increases the chance of human error and inconsistencies across systems.
- **Fragmented deal documentation process.** Data and deal documentation are stored in disparate locations with no central database, which makes it difficult to track changes from all parties in real time.
- **Customized lender requirements.** Each participating lender requires deal information data for its unique credit approval process.
- **Lack of coordination between parties.** The due diligence process is lengthy, and it is complex to coordinate deal documentation between lenders.

Centered on a joint Proof of Concept and case study, this white paper discusses how modern digital software platforms like Banyan Infrastructure can streamline inefficient processes, digitize and enhance data management, and create the visibility and control banks and other lenders need to overcome today's market barriers and cost-effectively scale to capitalize on new opportunities.

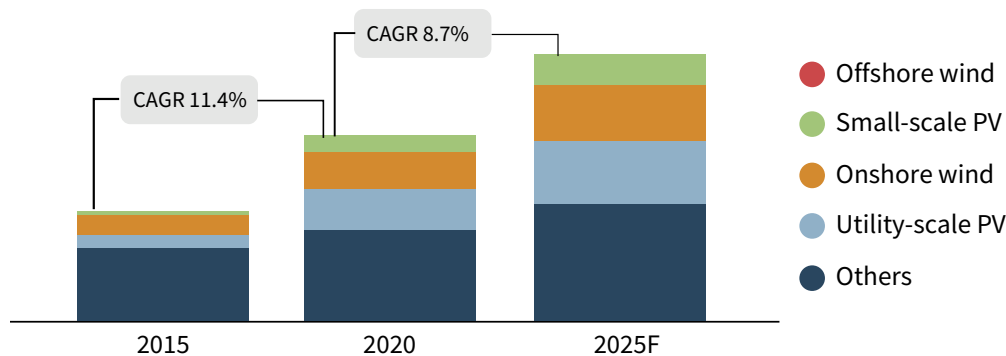


# Challenges to Originating Mid-tier Green Infrastructure Loans

## A Changing Market

Power generation and other infrastructure projects have historically focused on large projects with economies of scale and capital requirements in the billions of US dollars. This traditional project finance structure and process has worked well when the assets are backed by long-term offtake contracts from AAA credit institutions and the project sponsor is a well-known counterparty and experienced operator. Typically, a lead bank with domain expertise in project finance and the energy sector will underwrite the multi-billion US\$ facility to finance the project. The lead bank will then syndicate the facility to other participating lenders.

Due to declining costs, rising electricity consumption, and continued efforts by government bodies and multinational corporations to reduce carbon emissions, the global power generation and sustainable infrastructure market has been producing smaller projects at a growing rate. These projects have high potential value and impact and contribute to significant overall market growth.



	CAGR 2015-20	CAGR 2020-25F
Offshore wind	61.7%	21.2%
Small-scale PV	35.2%	15.5%
Onshore wind	12.9%	8.4%
Utility-scale PV	28.6%	13.5%
Others	4.9%	5.1%

For example, the APAC renewable energy market is expected to grow at a CAGR of 8.7%, from 1,284 gigawatts (GW) of installed capacity in 2020 to 1,951 GW in 2025. This rapid expansion has created growing and lucrative opportunities for experienced lenders to originate higher deal volumes and for newcomers to enter the market.

However, the industry's dependence on siloed systems and slow, labor-intensive processes has hindered its ability to efficiently and cost-effectively invest capital into smaller projects. Limited transparency and unfamiliar risk profiles often make these deals prohibitively complex and risky for lenders, and a lack of standardization extends processing time frames and drives up overhead costs. In short, these projects are viewed as unbankable primarily due to limited visibility and inefficient systems.

## Operational Limitations in Infrastructure Investing

### Manual Processes and Archaic Tools

Given its historical financial instruments' large size and bespoke structure, lenders have traditionally used manual processes and significant management oversight to manage each one over its lifecycle. The methods, software, and systems used to originate, monitor, service, and syndicate these financial instruments are static, reactive, periodic, and complex. Most lenders use on-prem self-built tools like Excel Workbooks that limit collaboration and increase the risk of human error.

### Lack of a Unified Database

Project owners and financial institutions rely primarily on data collected in siloed systems that require human expertise and labor to combine, interpret, and create periodic reports against bespoke contracts with contractual requirements tailored to individual projects. Risk management across each financial instrument is complex, requires significant management expertise to analyze, and is interdependent and often embedded in data that is not tracked in any standardized or systematic manner. Key data and documents are often stored in disparate locations, which impedes the efficiency and accuracy of reporting, compliance, and other critical tasks.

### Inability to Scale

Because key barriers to investing in mid-tier infrastructure loans are largely due to internal process and system limitations, these challenges can not be overcome cost-effectively by simply increasing internal headcount.

To effectively meet the demand of global infrastructure markets, the industry must embrace a modern digital solution that improves visibility and maximizes efficiency across the entire deal lifecycle. A simplified and streamlined solution will also improve visibility and coordination across the entire deal lifecycle, opening the doors to a more inclusive and diverse market.

# Digital First - A Modern Solution to Unlock Speed and Scale

For financial institutions to scale operations to capitalize on market opportunities effectively, current tools need to be replaced by a single cloud-based software solution that enables the automation of key processes and consolidates and replaces the capabilities of multiple disparate on-premise systems. Importantly, this platform should also create a single source of truth for all data and documents to facilitate real-time coordination of documents and information sharing between parties.

Banyan Infrastructure (Banyan) is a purpose-built SaaS platform designed to simplify, streamline, and scale sustainable infrastructure portfolios. Banyan's end-to-end software platform drives profitability, minimizes risk, and improves visibility and control across the entire deal lifecycle, empowering financial institutions to close more deals with dramatically less credit risk and lower cost of capital.

Current Barriers	Banyan's Solution
<b>Siloed, on-prem systems</b> that lack integration with other systems and limit collaboration	<b>Cloud-based for real-time coordination</b> across multiple teams and counterparties
Data is saved in <b>multiple disparate locations</b> that risk human error when updated	<b>Single source of truth</b> that enables standardized data, making it easy and efficient to share information
<b>Manual, complex processes</b> that increase overhead costs and limit scalability	<b>Optimized workflows and automation</b> , such as auto-filled templates for diligence checklists
Risk management analysis <b>requires significant expertise</b> and <b>lacks standardization</b>	Portfolio dashboards and standard risk scorecards enable <b>dynamic risk management and tracking</b>

**Table A:** Current Barriers and Banyan's Solution

Supported by a fast-growing, innovative team with diverse expertise, Banyan brings proven solutions from fintech and big tech to bring sustainable infrastructure investing into the modern digital age. Banyan is SOC 2 compliant, and it uses advanced encryption technology and granular controlled access to ensure the highest levels of security and confidentiality.

**The core values of Banyan's software are as follows:**

## **Banyan provides a single source of truth.**

Banyan creates a unified view of deal data. It drives consistency and transparency of information across critical risk management functions from the start, such as covenant compliance, investment metrics, and deal information.

Banyan allows internal stakeholders and external counterparties to collaborate, share deal information, and monitor deal performance throughout its life with consistent, shared data sources.

## **Banyan reduces time and operational risk.**

Using bespoke solutions for oversight and reporting, including Excel, means data must be collected and aggregated reactively—after it has become a problem.

Banyan provides data feeds for email, workflow, and API connectivity into the broader financial institution's ecosystem and provides a proactive, real-time, accessible view into live deal data and state.

## **Banyan streamlines manual and complex processes.**

Banyan optimizes workflows with industry best practices to support originating and servicing sustainable infrastructure assets, creating immediate return on investment for customers implementing the Banyan platform.

# Proof of Concept

## Overview and Goals

The joint proof of concept (POC) with global project finance leader Sumitomo Mitsui Banking Corporation (SMBC) and Banyan focused on streamlining SMBC's origination process, from proposal to credit application and documentation to reduce overhead, shorten turnaround, and enable SMBC to enter and command the mid-tier sustainable infrastructure market successfully.

The primary goal was to develop an origination application that enables SMBC to efficiently move prospective mid-tier sustainable infrastructure deals from proposal through credit application before passing the deal to their Credit team for approval and financial close.

At the end of the POC period, SMBC would ideally have clarity on the financial viability of entering the mid-tier sustainable infrastructure market, extrapolated from validated and proven time-saving assumptions enabled by the Banyan platform.

## Banyan's Solution

To help SMBC achieve its goal, Banyan focused on addressing three primary objectives across SMBC's internal processes:

- Minimize repeated tasks and processes.
- Reduce redundancies in workflows.
- Create a single source of truth.
- Reduce deal timeline through workflow time savings.
- Increase deal and pipeline transparency.

### **Objective #1: Streamline processes to scale sustainable infrastructure.**

Banyan created a centralized document repository with deal-specific access to requisite parties, which acts as a single source of truth where all deal data and documentation can be collected and stored. This cloud-based Data Vault provides 360-degree visibility and enables internal and external parties to securely share and extract critical deal data and information in real-time while managing version control. In addition, the database is easily retrievable and allows easy access to historical deal data, creating opportunities for analytics.

By storing data in a single place, SMBC will minimize the chance of manual error and duplication while reducing deal processing turnaround times and facilitating coordination between parties.

### **Objective #2: Increase deal velocity with quicker turnaround and reduced workloads.**

Throughout a deal's lifecycle, SMBC typically generates more than 20 required documents for approval, some over 100 pages. The time required for a single deal's document generation

alone could reach upward of 130 hours. Banyan addressed this issue by streamlining the data collection process and contractual compliance and creating templates that auto-populate deal document information and configurable checklists and scorecards to help SMBC manage deal origination and closing activities more efficiently. Banyan’s checklists will provide visibility into deal progress across the portfolio, and the scorecards will digitize the risk assessment process to evaluate quantitative and qualitative deal information.

Banyan also created the capability to embed configurable approval workflows and set automated notifications to alert users of important updates and outstanding actions. This Integrated approval module will allow for automatic approvals at various deal stages, eliminating the need for an external approval system. By consolidating all required documents and approvals into a single digital process, these features will facilitate quicker turnaround times and reduce time spent in the approval stages.

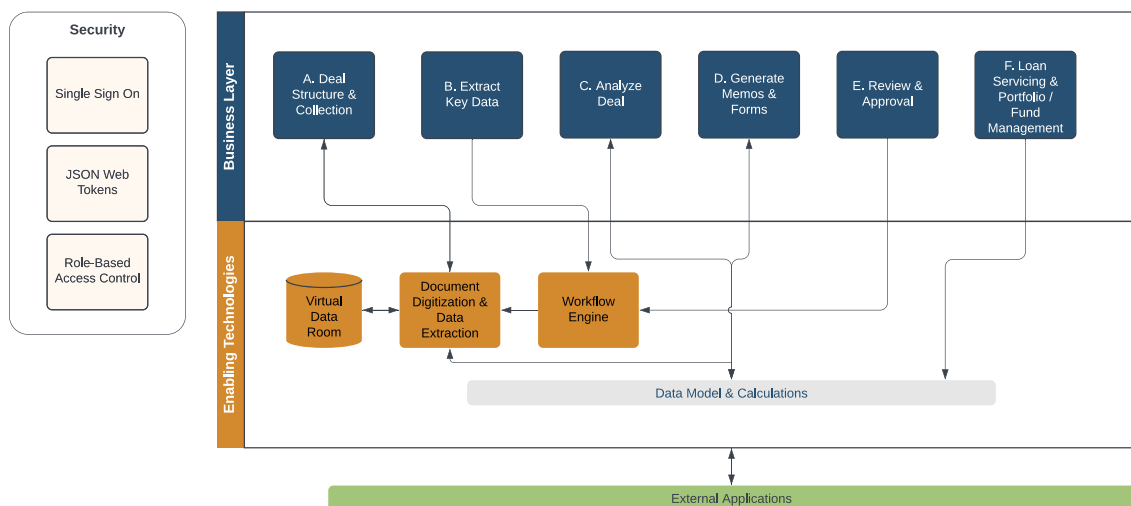
**Objective #3: Improve end-to-end transparency and reduce risk.**

While monthly reporting does not contribute directly to deal throughput, it requires the time and input of the project finance team, roughly translating to more than 100 hours of work every year.

To address this, Banyan created a dashboard that automatically generates monthly reporting, eliminating the need for manual work from the project finance team. In the user-friendly dashboard, the team can monitor deal activity and pipeline progress across teams and track changes in key deal information. With this dashboard, the SMBC team can dedicate the 100 hours previously allocated to tedious report generation to fostering high-velocity deals.

**Development of Platform Features**

Banyan identified and developed five feature sets to streamline workflows, improve stakeholder collaboration and communication, and reduce overhead across the origination and underwriting process. After conducting in-depth discovery sessions with the SMBC Project Finance team to understand the team’s current processes, Banyan identified several key areas of opportunity where it could address critical pain points and help accelerate deal velocity. To ensure that the features delivered would significantly impact SMBC’s internal operations, Banyan and SMBC teams partnered to assess and prioritize the high-value features to include as part of the POC scope of work.



## 1. POC Design

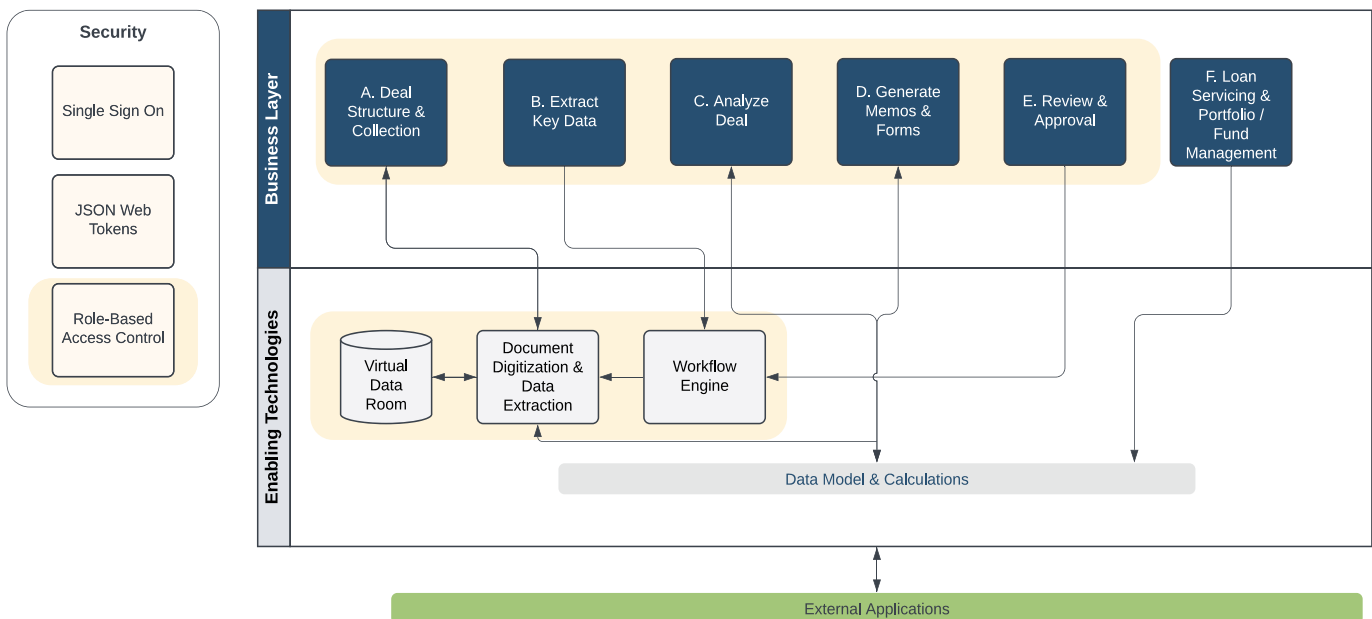
To inform the POC scope, SMBC provided Banyan with information about its internal processes, which Banyan used to create detailed process documentation of SMBC's operations. This document included quantifying the impact of Banyan features and tools on each task in terms of the hours required. From this, Banyan identified potential areas of opportunity to develop or customize features to meet the three primary POC objectives.

## 2. Feature Prioritization

With the potential features identified, Banyan conducted a prioritization exercise to align with SMBC on what features would have the most significant value, including developing future state process flows to help users visualize how different steps of the deal process could be streamlined or even shortened. Once the final objectives and POC features were approved by SMBC leadership, Banyan developed a multi-step, iterative execution plan to deliver:

1. Checklists: Track, manage, and collaborate on crucial deal activities, diligence items, and documents.
2. Multi-layer approvals: Assign and execute approval workflows to deal team members for each checklist task or deal document.
3. Forms: Generate deal documentation with dynamic details to minimize redundant effort to track and update essential deal information.
4. Template Library: Customize a library of standard checklists, forms, and other Banyan tools to easily and quickly set up and manage new opportunities.
5. Central data room: Create a single source of truth for deal documents throughout its life and manage changes with audit trails and version history.

KEY: POC AREA OF FOCUS



### 3. Feature Roll-Outs and Initial Implementation

Banyan incrementally delivered feature sets for origination, enhanced approval processes, and digitized deal documentation over three months. As Banyan delivered new feature sets, SMBC tested them and provided Banyan with feedback.

### 4. Validation and Testing

Once Banyan delivered all features, SMBC used two real deals to test their origination and underwriting processes using the new capabilities on Banyan. SMBC provided additional feedback from these tests to enhance permission flexibility and usability. Over the following quarter, Banyan delivered the requested critical enhancements, including but not limited to:

- The ability to configure platform access rights;
- The ability to create user groups to assign as approvers or to deal teams;
- The ability to view document version history and revert to prior versions;
- The ability to quickly navigate to crucial deal tools (forms, checklist tasks, scorecards)
- The ability to view deal structure oriented around the borrower.

## Challenges

### Software Integration

Due to the abridged timeline, integrating the Banyan platform with existing software was not part of the POC. The lack of integration made complete data gathering for the POC more complex, as data was stored in various internal locations and required different levels of permissions to access. To address this, Banyan built Excel functionality that automated the intake of some data. Further integration with SMBC's internal systems would be necessary to maximize value.

### POC Validation Timeline

The business goal of this proof of concept is to assess whether it is financially viable for SMBC to enter the mid-tier infrastructure market. However, because the validation period for the POC was much shorter than the timeline for an entire deal lifecycle, a comprehensive and accurate measurement of the time savings could not be completed. However, the outcomes for this POC are promising. Future work would have to be done to show a complete lifecycle measurement.

### Results and Outcomes

As a result of this POC, SMBC will see significant time savings across its origination processes. With Banyan, that deal duration (from NDA to credit approval and closing) will be reduced by up to 30 days, enabling more than a 40% increase in deal throughput.

With only the POC features of the Banyan platform, SMBC will see a conservative estimate of 25% time savings per deal. An additional 10% in savings could also be achieved with other Banyan features not included in the POC, such as the ability to collaborate with external counterparties to securely gather and share information.

**Banyan**

Initial Screen: 2 | Deal Review: 1 | Due Dilligance: 1 | Contracting: 3

**Deals** New Deal +

NAME	DEAL STATUS	INVESTMENT DEAL STATUS
[Redacted]	Contracting	Final Approval
[Redacted]	Declined	—
[Redacted]	Initial Screen	Pending Approval
[Redacted]	Deal Review	Pending Approval
[Redacted]	[Redacted]	[Redacted]

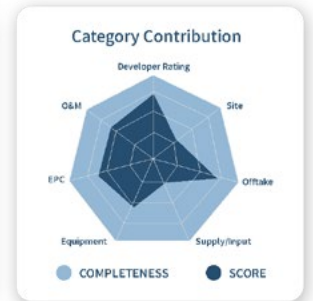
**Attach a Document**

UPLOAD ↑ | DATA ROOM

Drag file here or click to select from your device

**Questionnaires** View Mode

- Preliminary Diligence List: 9 Questions
- Solar Specific Intake Questions: 9 Questions
- Model Inputs: 0 Questions
- Developer Background Information: 2 Questions



**Score Summary**

CATEGORY	SCORE	WEIGHT	WEIGHTED SCORE
Developer Rating	12/15	10%	8.0%
Site	15/22	15%	10.2%
Offtake	11/15	10%	11.0%
Supply/Input	3/12	10%	2.5%
Equipment	12/21	15%	8.6%
EPC	10/15	20%	13.3%
O&M	6/9	15%	10.0%

- 50 Deal Kickoff
- 25 Initial Screen
- 80 Conditions Precedent
- 28 Term Sheet & Initail Due Dilligence
- 85 Detailed Due Dilligence & Contracting
- 25 Closing

**View Mode**

- 3/5 Tasks Completed
- 1/7 Tasks Completed
- 2/5 Tasks Completed
- 1/15 Tasks Completed
- 9/9 Tasks Completed
- 3/7 Tasks Completed

**Table B below breaks down the time savings gained with Banyan by task:**

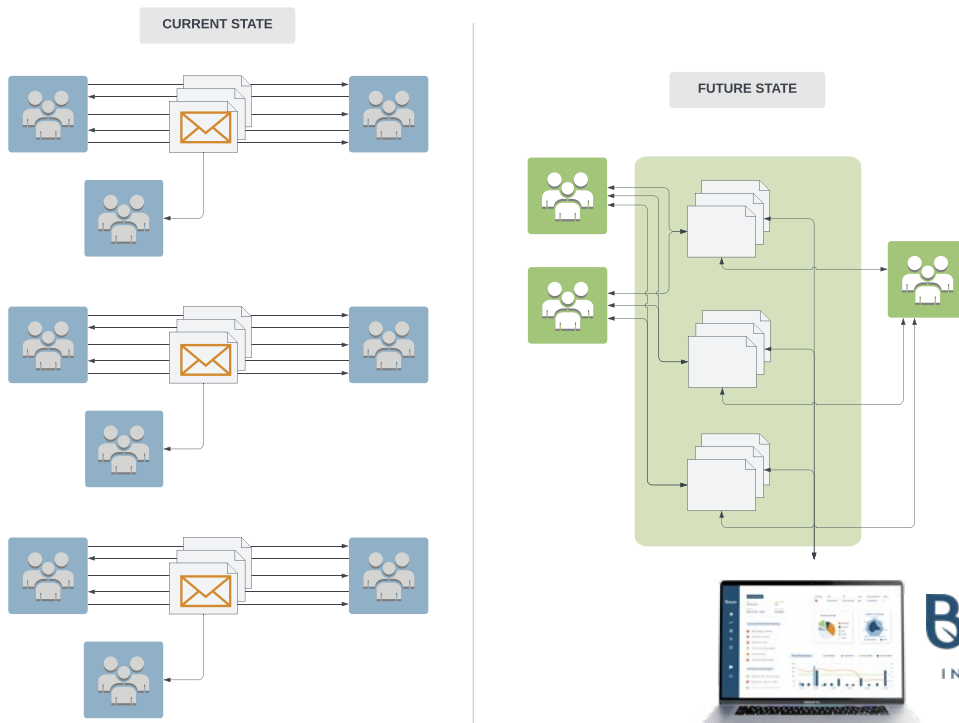
Task	Estimated Time Savings with Banyan POC
Information sharing/review with internal parties	15% time savings
Generate required documents	15% time savings
Receive approval from all parties	60% time savings
<b>TOTAL EST TIME SAVINGS PER DEAL</b>	<b>25% time savings</b>

**Table B:** Estimated Time Savings with Banyan by Origination Task

With the savings delivered from using Banyan, in conjunction with simplifying and streamlining their current processes, SMBC will be able to enter and generate revenue from this mid-tier infrastructure market, which was previously inaccessible due to the high-cost relative to the project size.

The POC's final deliverables included:

- A current state diagram of end-to-end workflow/experience map using current processes and tools;
- A future state diagram of end-to-end workflow/experience map using Banyan for mid-tier infrastructure deals
- Assessment of SMBC's time savings using Banyan, based on bringing a single \$USD 10-20M renewable project through a proposal to credit application sent to SMBC's credit team
- A viable Origination application for SMBC to use for mid-tier infrastructure deals.



# Learnings and Conclusion

With this POC, Banyan demonstrated that a modern digital solution can facilitate significant operational improvements in sustainable infrastructure investing and open up new business opportunities for organizations in the industry. SMBC achieved an overall 25% efficiency across its originations processes and established a single source of truth, enabling permissions-based visibility to critical documents and digitized data for all parties and counterparties. This increased throughput shows that SMBC has the internal operations and workflows to originate mid-tier sustainable infrastructure deals effectively.

With the Banyan platform, SMBC can now take advantage of growth opportunities like scaling operations or entering new markets. In short, Banyan's comprehensive and collaborative modern solution has opened up significant new opportunities for SMBC. The time that the team spent working through operational red tape is now freed up for SMBC to focus on business strategy, internal alignment, and efficiently bringing capital to high-velocity deals.

Banyan is rooted in an ecosystem-based approach that facilitates engaged and productive collaboration between parties, counterparties, and stakeholders. Organizations working across the entire deal lifecycle can benefit from unified data, customized monitoring and reporting, streamlined loan structures, and enhanced transparency and coordination.

SMBC's new business capabilities prove that Banyan's data digitization, automation features, and streamlined workflows provide a modern technology solution that supports the growth of the entire ecosystem of banks, lenders, and developers. By improving transparency, supporting risk mitigation, and facilitating comprehensive and organized data management across the entire lifecycle of a deal, the Banyan platform has the potential to support organizations in unleashing capital into – and profiting from – new opportunities in global sustainable infrastructure markets.





## Unleash the power of sustainable capital.

Banyan is the only end-to-end software platform that is purpose-built to simplify, scale, and streamline sustainable infrastructure finance.



### Contact us

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