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10 Must-Stops Along the Road to Modernization

When digitizing your transportation agency, be sure to visit these key areas that offer the most opportunity to fuel progress.

In an age of crumbling infrastructure and budgetary pressure, the need for speed and efficiency has never been greater. Whether repairing dilapidated bridges, paving new roadways or upgrading public transit systems, navigating projects throughout their entire lifecycle is often riddled with roadblocks and detours.

And with multiple stakeholders impacted — including taxpayers trying to go about their daily lives — the sense of urgency to deliver on time and on budget ramps up with each project.

Your legacy or homegrown system is likely adding to this pressure with its siloed, possibly stale data that is unwieldy to share on time and at appropriate permission levels.

By digitizing your construction project management information system (PMIS), you can cruise through many of these barriers. In this document, we map out the 10 pivotal areas where modernization will turbocharge your transportation projects.

1 STIP/TIP Management

Managing a transportation improvement program (TIP), whether local or statewide, involves maneuvering through notable complexities, including:

- Balancing limited resources with extensive infrastructure needs
- Complying with evolving regulations
- Coordinating multi-agency collaboration
- Addressing diverse community needs
- Ensuring funding alignment
- Adapting to dynamic project scopes while maintaining program efficiency and transparency

Map a digital course to a solution specifically designed for STIP/TIP management that works holistically across the program level, not solely for individual projects, to:

- Streamline the compilation of multi-year intermodal projects for funding approval
- Accommodate both minor modifications and major amendments to existing STIP/TIPs, reflecting changes in project scope or cost
- Facilitate the creation of tailored scenarios for STIP/TIP submissions
- Ensure efficient change management
- Simplify the gathering and packaging of projects, enabling consistent and streamlined reporting

2 Capital Planning

Effective capital planning demands foresight, strategic allocation of resources and adaptability to ensure sustainable, efficient and resilient transportation systems.

Old-school, legacy planning methods are likely holding you back here, particularly with the firehose of $1.2 trillion IIJA funding and public pressure for infrastructure improvements to be delivered.

When evaluating modernization options, be sure they enable you to immediately start making data-driven decisions and give a much-needed assist with:

- Aggregating views of projects and capital spend
- Determining feasibilities and requirements
- Developing programs and execution strategies
- Connecting impacted assets to the capital plan with condition assessments and spatial awareness

3 Funding

The plethora of available funding sources creates unique challenges for planning through execution due to very specific, complex rules for appropriation, release, utilization and reimbursement.

If your current system isn't agile enough to keep pace with the rapidly evolving funding landscape, you could leave money on the table.

Or if you're lacking integration and automation, you could unwittingly blow past crucial reimbursement deadlines or bypass the myriad federal grants available, including from the Infrastructure Investment and Jobs Act (IIJA), for example.

With a leading PMIS, you could easily define the availability and assignment methods for all funding sources, and tie funding to budgets, commitments and invoices.

Imagine what a 360-degree view of funding with historical, real-time and projected visibility could do to meet today's reporting requirements and capitalize on tomorrow's opportunities.

When evaluating digitization options, consider functionality in these critical areas:

- Categorizing sources to simplify tracking
- Utilizing tools to control timing of appropriations, reserves and releases
- Defining and implementing budget and spending rules
- Complying with tracking for reporting, reimbursement and audits

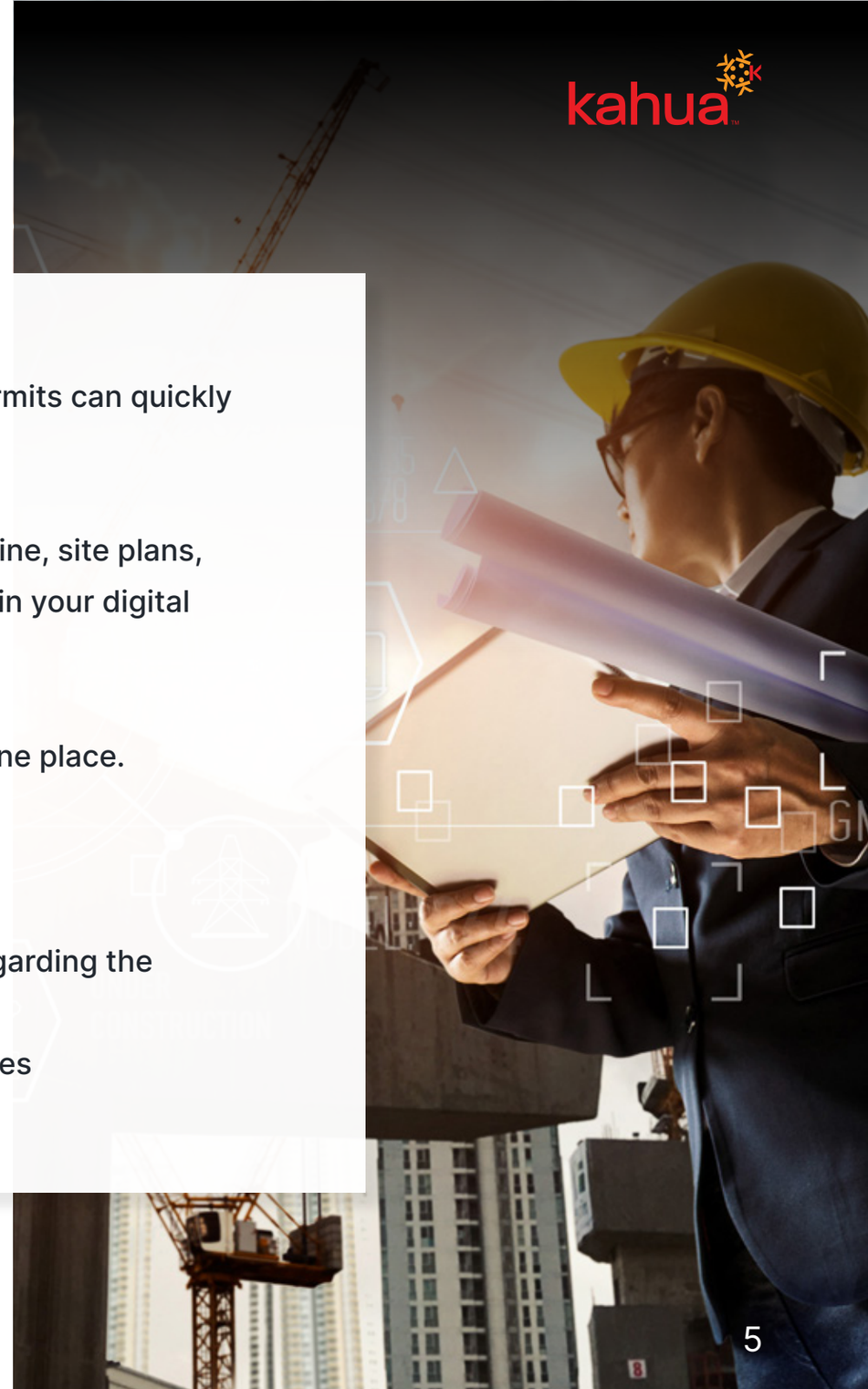
4 Permitting

Given that projects often span multiple locations, including crossing city and county lines, permits can quickly become a tangled labyrinth.

Tracking, managing and complying with all levels of permitting rules — related to scope, timeline, site plans, signage, traffic control, public safety and more— can be far less daunting with the right apps in your digital toolkit.

Expect to fast track shovel readiness and seamlessly manage all permitting requirements in one place. Digitization will enable you:

- Identify mandatory permits at the program and/or project level
- Utilize GIS location tracking to identify all involved parties and offer clear information regarding the project's effects on stakeholders
- Initiate permitting procedures and maintain updated status to monitor milestone deadlines



5 Interagency Coordination

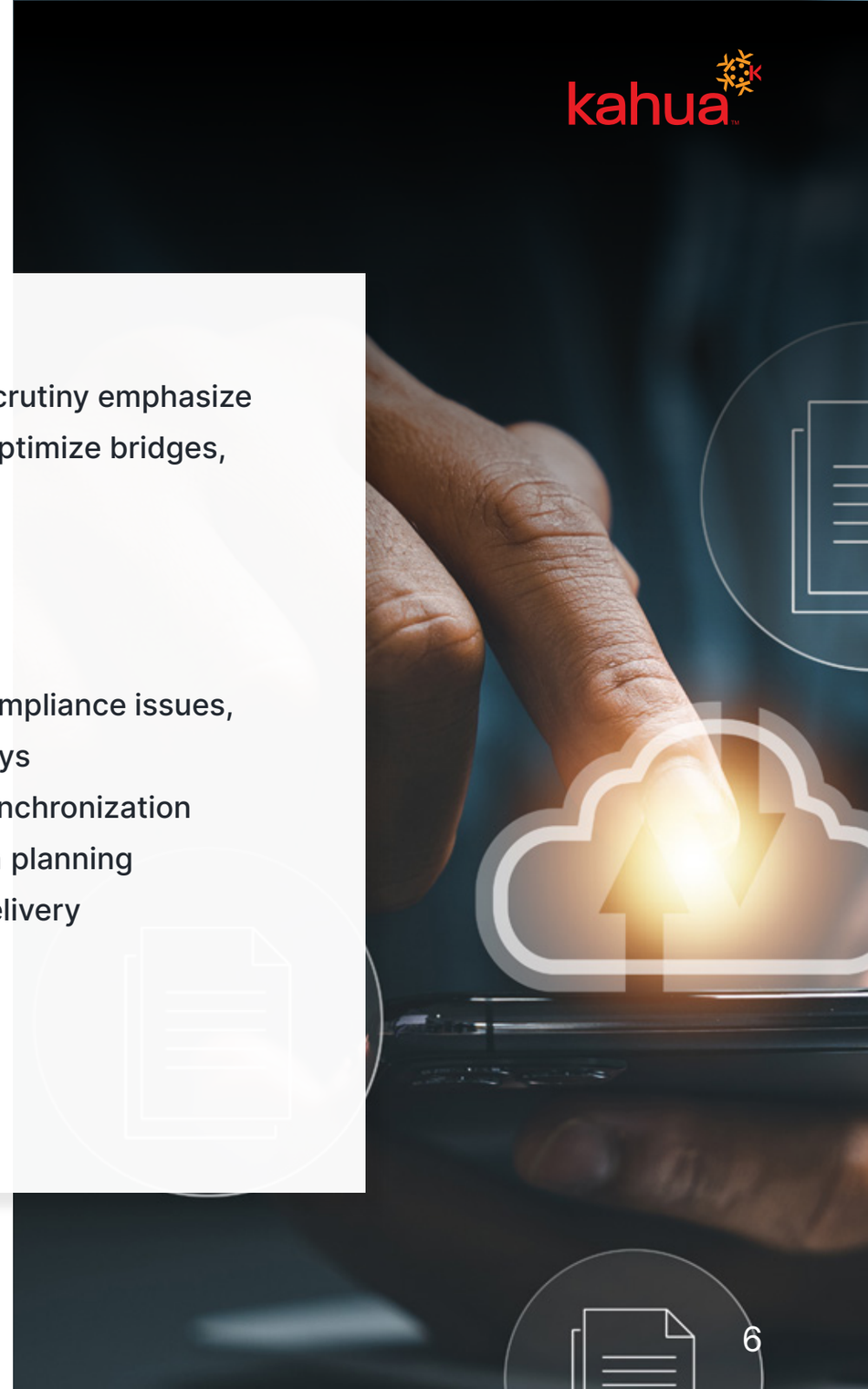
The transportation industry faces intricate challenges in coordinating large projects involving roadwork, bridge construction, utility relocation and traffic management.

Coordinating diverse teams, subcontractors and suppliers amidst simultaneous federal, state and local projects poses significant hurdles.

Escalating material costs, logistics and public scrutiny emphasize the need for unified strategies to manage and optimize bridges, highways, airports and public transit projects.

Leveraging and safeguarding data can:

- Mitigate budget constraints, regulatory compliance issues, stakeholder management and project delays
- Enhance transparency and interagency synchronization
- Facilitate communication and coordination planning
- Ensure optimal accountability in project delivery



6 Security

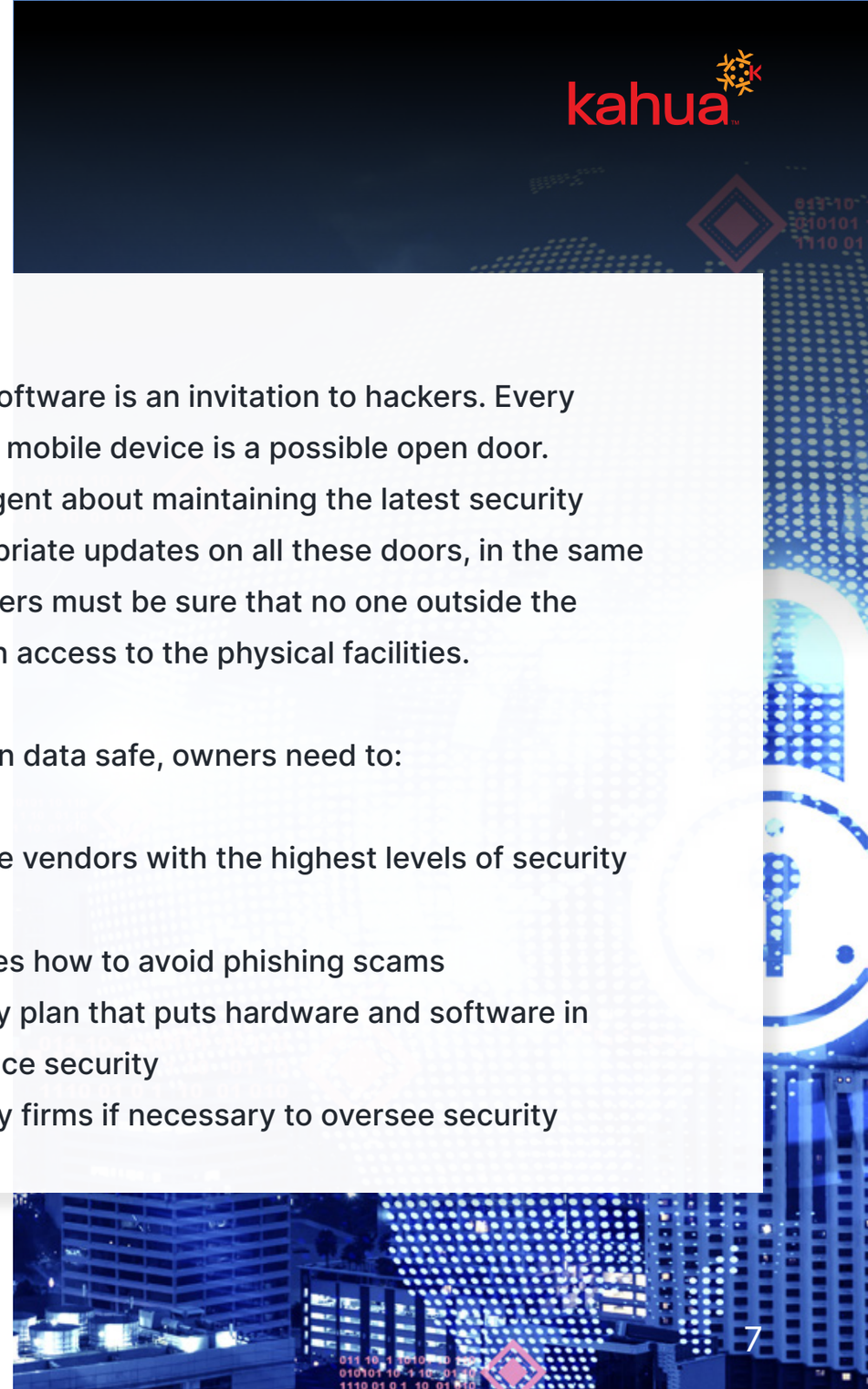
While the need for collaboration and transparency is critical to the success of transportation projects, the demand for security is just as great. It is wise for all departments of transportation to utilize only PMIS vendors that are FedRAMP authorized, as it provides the most comprehensive and effective controls and guidelines for software selection. With multiple agencies and contractors logging in, owners must ensure they have the highest level of cybersecurity overlaying their programs.

Cyber attacks are on the rise – including on government agencies – with 1,800+ reported in the U.S. last year. Continuously evolving data security must be a top priority to stay ahead of malicious actors.

Outdated security software is an invitation to hackers. Every desktop, laptop and mobile device is a possible open door. IT staff must be diligent about maintaining the latest security software and appropriate updates on all these doors, in the same way building managers must be sure that no one outside the organization is given access to the physical facilities.

To keep construction data safe, owners need to:

- Utilize software vendors with the highest levels of security authorizations
- Train employees how to avoid phishing scams
- Have a security plan that puts hardware and software in place to enhance security
- Hire third-party firms if necessary to oversee security



7 Public Transparency

Keeping the public informed about ongoing and planned transportation projects is vital as it directly affects their daily lives and financial contributions as taxpayers.

Transparent communication fosters understanding of project goals, timelines and potential disruptions, allowing individuals to plan and adjust their routines accordingly.

An informed citizenry can advocate for efficient resource allocation and participate in decision-making processes, contributing to the creation of transportation infrastructure that better serves the entire community.

Today's digital tools can:

- Facilitate public outreach and engagement
- Share limited, trustworthy project data
- Provide the foundation for informed public response and feedback

8 Portfolio Management

Legacy systems, often with siloed spreadsheets, can put the brakes on effective portfolio management. Without a single interface, how do you track all projects of any size and analyze different angles of all your programs?

And with the volume of projects being supercharged by IIJA, can you keep pace and quickly access vital details when you need to?

For top-down and bottom-up visibility, modernization can put you in the fast lane.

Look for a solution that includes a hierarchically structured portfolio manager for easy, at-a-glance health checks and quick drilldowns. Empower your teams to group projects in alignment with how they work, such as by any combination of:

- Division
- Business unit
- Program
- Capital program year
- Region

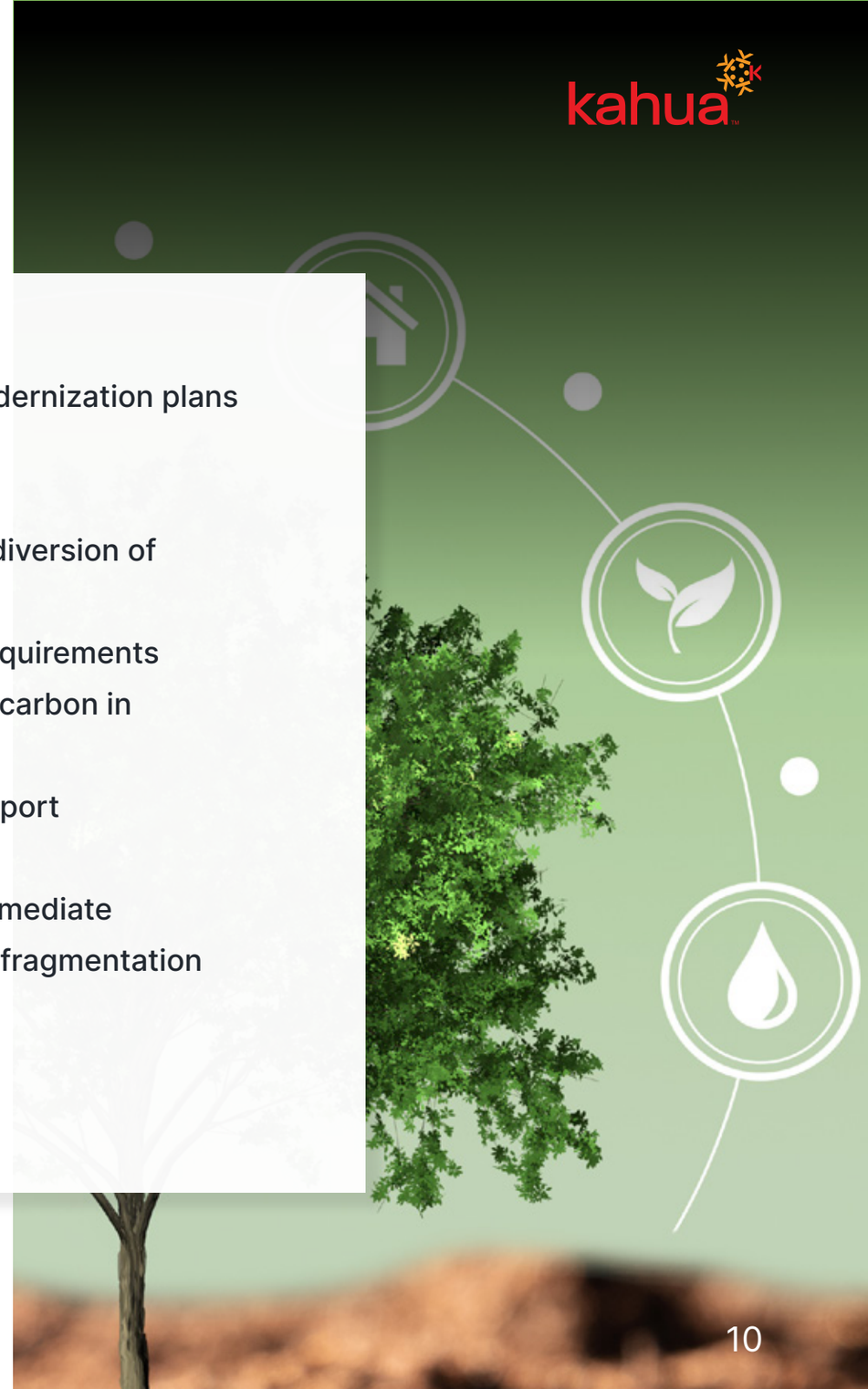
9 Environmental Compliance

A core challenge lies in aligning projects with tightening environmental regulations. The right technology can streamline compliance by enabling more efficient, systematic collection and reporting of these key factors:

- Sustainability scopes
- Environmental performance goals
- Compliance with government mandates for sustainable federal buildings

Enhance overall efficiency by ensuring your modernization plans include a single solution to:

- Methodically track carbon emissions and diversion of project waste
- Balance schedule and cost with “green” requirements
- Track materials testing to ensure reduced carbon in concrete used in projects
- Reduce the time needed to compile and report compliance data
- Seamlessly share with stakeholders for immediate access to reports, eliminating data loss or fragmentation



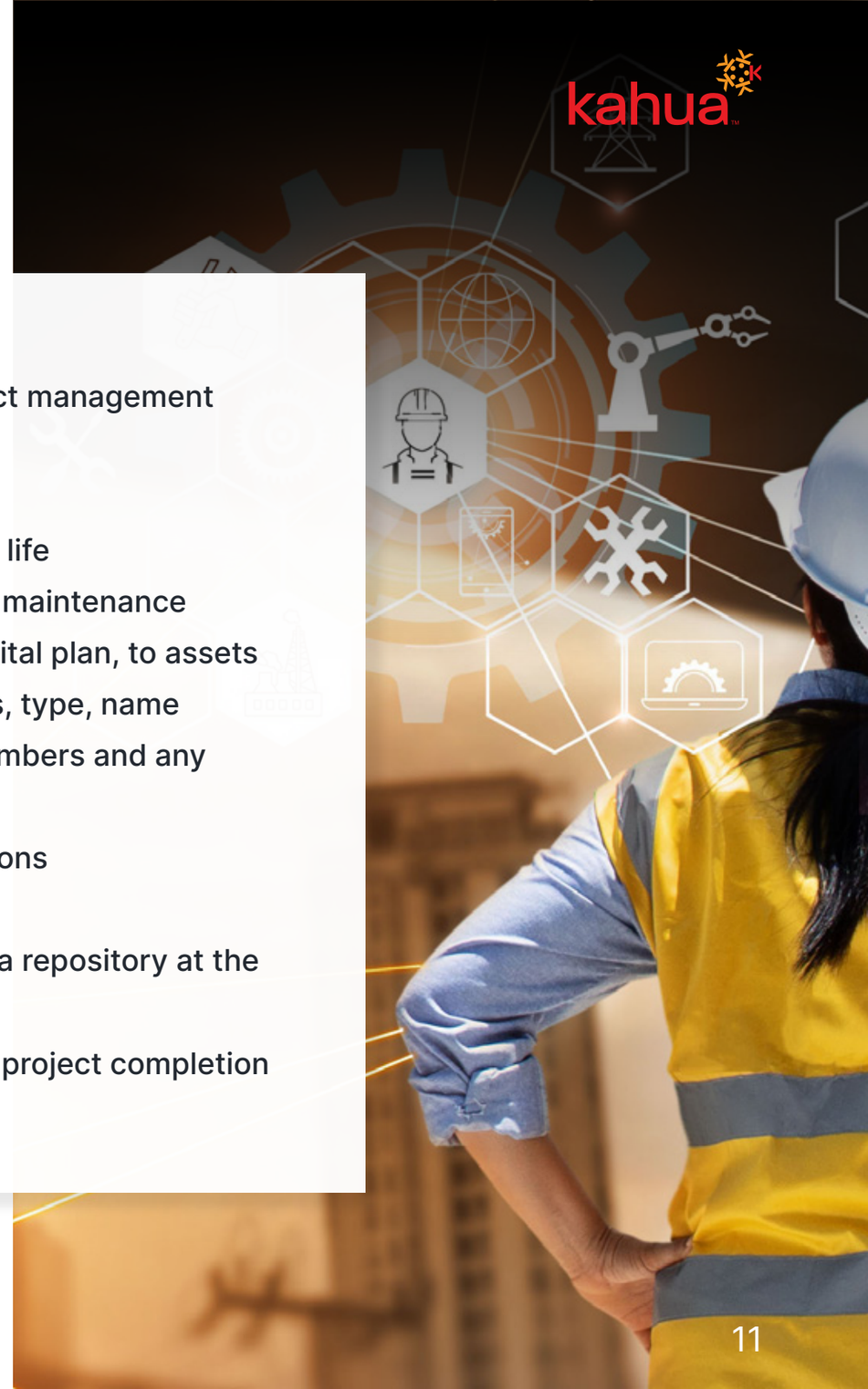
10 Asset Management

Like many capital-heavy organizations, transportation owners need alignment between growing assets and maintaining them productively — at every stage of the lifecycle — including at post-project handover.

If you begin with the end in mind and manage assets accordingly, you'll have more control over decreasing total cost of ownership. This would be extremely difficult to implement with legacy, more analog systems.

Instead, consider an asset-centric, digital project management system to:

- Inform decision making over an asset's full life
- Deliver actionable data for operations and maintenance
- Link essential documents, such as the capital plan, to assets
- Identify and track asset attributes by class, type, name description, installation date, serial/tag numbers and any linked documents
- Integrate to BIM, ESRI and/or CMMS solutions
- Plan for maintenance and enhancements
- Automatically create a comprehensive data repository at the beginning of the asset's life
- Enable seamless digital asset handover at project completion



When considering the most efficient and secure PMIS for transportation projects, keep these ten essential factors in mind. Discover how Kahua excels in these spaces and can help you create on-time, on-budget highways, bridges and public transit.

Schedule a demo or contact an account expert today.

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