

Project

13

Smarter, better,
high-performing
infrastructure,
from delivery to
operation and
customer outcomes.

Insights and guidance on how to
use the **Project 13** enterprise model

Project 13 – A better way of delivering infrastructure

Are existing relationships and methods for creating infrastructure the best they can be? Of course not.

Many great projects are delivered. But many more underperform during construction. And few projects are started with whole-life performance in mind.

Project 13 is designed to change that, for the benefit of owners, supply chains and society.

The traditional transactional model for delivering major infrastructure projects and programmes in the UK is unsustainable.

Focus on outputs and lowest price results in low margins and low investment back into the industry, and rarely provides the best outcomes or value for money.

The current disintegrated approach locks the supply chain into dysfunctional relationships, which hinders collaboration and sharing of knowledge.

It also prohibits innovation and holds back the infrastructure sector from embracing the digital transformation that is benefiting other industries.

All this results in assets that too often are delivered over budget, behind schedule, and perform poorly.

Smart working practices

Project 13 is an industry-led movement to improve the way infrastructure is delivered. It is based on core principles that enable a new operating model for 'enterprise' working.

The vast potential of Project 13 lies in promoting supply chain integration, enabling smart, collaborative working practices, and aligning commercial arrangements and incentives with customer and end-user outcomes. It emphasises the need to recognise infrastructure as an information-based industry.

The benefits of Project 13 will be greater certainty, productivity, performance and value in delivery and operation, and a more sustainable, innovative, highly skilled industry.

Five key elements of the new approach

Project 13 has identified five key areas of focus which are critical in enabling the enterprise approach:

1

Capable owner – The owner sits at the heart of the enterprise, not just as the owner of the assets, but also as the owner of the outcomes for the customers.

2

Governance – There needs to be a shift in focus from price to value. Commercial arrangements and incentives will be aligned with customer outcomes and whole-life cost.

4

Integration – An effective integrator will pull together the partner ecosystem to deliver the required outcomes. It entails integration across the end-to-end delivery process.

Digital transformation – Effective information management across the enterprise and throughout the delivery process will be a key enabler of success. Digital transformation is more about people than it is about technology.

3

Organisation – Enterprises will increasingly be coalitions of partners and suppliers working with aligned commercial interests within a defined framework.

5

“The **benefits of Project 13** will be greater certainty, productivity, performance and value in delivery and operation, and a more sustainable, innovative, highly skilled industry.”

In this document our experts give their insights on these five enablers to increase understanding, alongside the Project 13 maturity matrix which will allow you to chart your success in adopting the core principles.

The criteria in the matrix – based on industry experience – outline how progress in the five areas is related to the evolution of an organisation, from simple collaboration through integrated functions and relationships to a high-performing enterprise.

I and many of my colleagues at Mott MacDonald feel privileged to have played a part in developing and driving forward the implementation of Project 13.

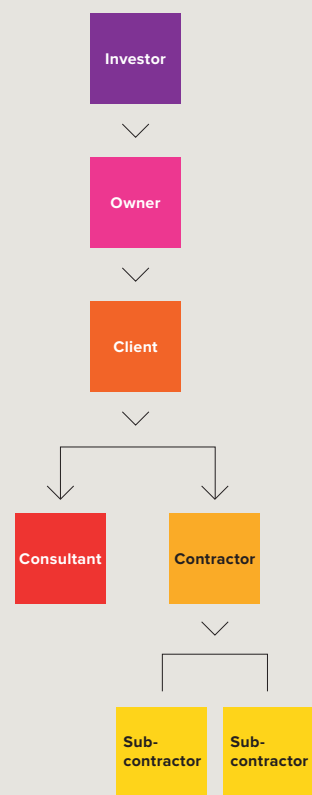
We believe it will deliver the cost-efficient, resilient and sustainable infrastructure needed to support enhanced social, economic and environmental outcomes.

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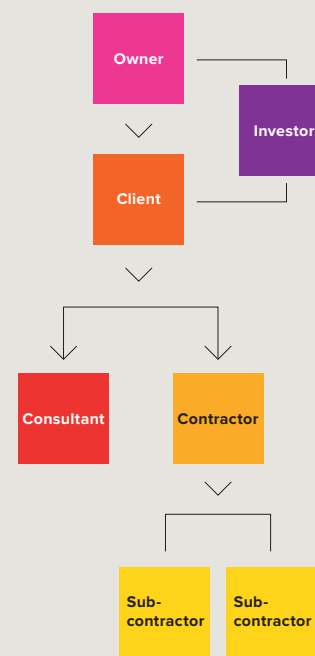
The Project 13 backstory

From transaction to shared enterprise

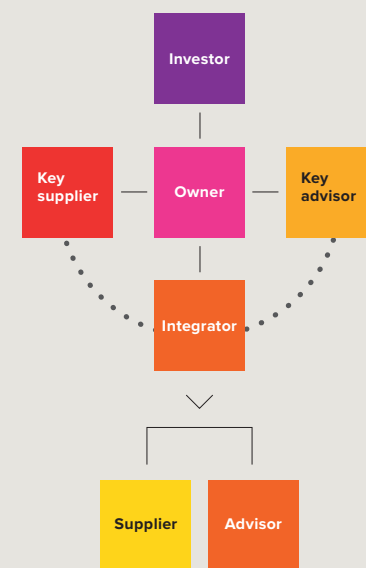
Transactional structure (private)



Transactional structure (public sector)



Project 13 enterprise structure



“An enterprise can be defined as being a productive long-term relationship between the owner, integrator, advisors and suppliers.”

The conceptual case for Project 13 was first set out in the report *From Transactions to Enterprises*, published by the Infrastructure Client Group (ICG), which represents the largest body of infrastructure clients in the UK.

By identifying and sharing best practice, the ICG works to improve the development and delivery of infrastructure. It has worked closely with the Institution of Civil Engineers in developing Project 13 – so named simply because it was the 13th project in a series of ICG projects.

The ICG’s members recognised the need for a new approach to delivering the UK’s infrastructure that will produce better outcomes.

Enterprise model is fundamental

Switching from a transaction to an enterprise model for infrastructure delivery is fundamental to the Project 13 approach. An enterprise can be defined as being a productive long-term relationship between the owner, integrator, advisors and suppliers. These organisations are commercially aligned and incentivised to deliver better outcomes for the end-users.

The roles, capabilities and behaviours of an enterprise differ from those in much of the construction industry today. The most significant changes to the structure are:

- The asset owner is central and leads the enterprise
- An integrator actively engages and integrates the supplier ecosystem
- The owner, key suppliers, advisors and integrator work as one team
- Suppliers have a more direct relationships with the owner

The main differences between an enterprise and a traditional construction programme are:

- Reward/profit in the enterprise is based on value added towards the overall outcomes
- There is greater understanding of cost drivers and risk across all organisations in the enterprise, with commercial incentives for collaboration to jointly mitigate risk, not transfer it
- Establishing a high-performing enterprise requires a fundamental shift in leadership, governance, behaviours and skills to succeed

For further information, visit: www.p13.org.uk/

Capable owner

Core principles

The owner develops enterprises built on long-term business-to-business relationships

The enterprise is set up to deliver:

- clearly articulated customer outcomes
- long-term asset performance

Maturity matrix

Simple collaboration

In regular communication with and aware of the requirements of the customer and operation.

Repeat contracts and collaboration with the supply chain at project level.

Increasingly open to skills from other industries.

Integrated functions and relationships

Ongoing effective engagement with operations and customers throughout the lifecycle.

Contracts can be flexibly applied by the owner to seek constructive resolution and encourage innovation and collaboration at programme level.

Senior leaders across the owner organisation are committed to a new way of working. Diversity actively sought and colleagues have experience across multiple functions and sectors.

High-performing enterprise

Customer outcomes translated into clear requirements and targets, agreed and cascaded through the whole enterprise. Integrated, proactive and collaborative approach with operations, who are embedded in the programme team and define requirements.

Trust and relationship-based contracts between the capable owner and ecosystem are driven by well-defined value.

Employer of choice.

Insight

The capable owner has a vital role

Under Project 13 the infrastructure owner must understand the role and performance of each asset in their portfolio in meeting core business aims and end-user needs.

To achieve this there must be a realisation from the outset by the owner of their strengths and weaknesses so that they can fill any gaps and truly become a 'capable' owner.

The capable owner will be responsible for the ultimate performance of their new infrastructure and must fully understand how they want the new infrastructure to contribute to their broader network or asset portfolio.

But to do this they must understand the nature of their existing infrastructure (condition, performance, lifespan), its capabilities and constraints and, most importantly, the existing and future demands placed upon it.

This also enables the capable owner to be the 'voice' of the customer within the enterprise, ensuring the operational outcomes meet the ultimate customers' needs.

John Seed

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Overview

The 'owner' of infrastructure typically operates, maintains, upgrades and enhances it, too. The Project 13 enterprise structure requires a 'capable owner' to lead the enterprise and define what long-term value it is seeking and must achieve for the enterprise.

A capable owner must be much more than a transactional client, requiring some key competencies that are not always present in infrastructure companies:

Ownership – The capable owner understands existing demands, capabilities and constraints through data capture and performance metrics, and must act as the 'voice' of the ultimate customer.

Leadership – This means managing internal and external stakeholders, approving the

delivery strategy and appointing the integrator and advisors. The capable owner also promotes collaborative working across the delivery team.

Value for money – The capable owner defines the outcomes (rather than short-term outputs) based on long-term value. The owner should also develop and own functional specifications geared to achieving its target outcomes – but in collaboration with the members of the enterprise.

The Infrastructure and Project Authority's Project Initiation Routemap is a tool that a prospective capable owner can use to assess if they have all the right capabilities to be as effective and efficient as possible in this role.



Governance

Core principles

Value is defined at outcome level – through baselines, benchmarks or affordability

The enterprise is rewarded for outcome performance

Risk allocation is aligned with capability – and where possible jointly owned

The commercial arrangements provide the potential for sustainable returns

There are clear incentives and opportunities for investment

Maturity matrix

Simple collaboration

Value appraisal goes beyond initial capex and incorporates outcomes in addition to outputs assessment.

Procurement models target attainment of value (outputs and outcomes) and appropriate adaptation of standard form contracts and equitable risk sharing.

Appraisal is based on risk, value and outcome benefits with limited benchmarking.

Clear organisational division of responsibility for approval of investment, acquisition strategies and managing assets.

Integrated functions and relationships

Value appraisal goes beyond initial whole-life cost and incorporates outcomes in addition to outputs assessment.

Procurement models target attainment of value (whole-life cost and outcomes) and appropriate adaptation of standard form contracts and commercial risk sharing.

Performance standards and value definitions are agreed by all organisations and beginning to be benchmarked over long-term relationships (10+ years).

Appropriate experience of delivering infrastructure programmes embraces whole-life value in acquisition strategies and has robust processes to ensure supply chain representation.

High-performing enterprise

Value appraisal is fully embedded, in terms of outcomes per whole-life pound. A sophisticated range of outcomes is included.

Procurement models are jointly created within a single enterprise and commercial structures are strongly linked to realisation of outcomes.

System-wide strategy and solutions delivered through long-term enterprises and ecosystems. Applying and measuring performance through benchmarking across enterprises.

Long-term outcomes are successfully achieved through embedded partnerships and collaborations.

Insight

Governance is hallmark of Project 13

The primary reasons for project failure are usually poor project initiation, poor leadership or a lack of sponsorship. Governance is threaded through all these factors, and the first step to turning things around.

Good governance creates a culture and environment where leaders can be effective.

It should be 'light touch', blending the right people, empowered at an appropriate level, with the right structures and 'one truth' reporting to make timely decisions.

The trust developed between these individuals is vital. Falling back on the contract, on either side, in all but the most pressing of situations, is no substitute for a strong, integrated leadership team.

All this is underpinned by appropriate governance that is transparent, welcomes challenge, facilitates sound decision-making, and defines value in terms of outcomes and whole-life cost. Technical competence in project delivery is, of course, essential, but it is the minimum requirement of a supplier.

Delivering major projects is an intensely human activity – even the most technical challenges – so leader interaction, teamwork and governance, all hallmarks of Project 13, are essential.

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Overview

The cornerstone of the new approach to governance lies in aligning commercial arrangements and incentives with customer and end-user outcomes, and then defining value in terms of the outcomes and whole-life cost.

An effective system of governance would provide a consistent approach to delivering value throughout the life of an infrastructure asset.

But this requires owners to have the capabilities to define value in the initial planning of an investment and then track its delivery through the life of the asset.

The new approach establishes long-term relationships between the owner, the integrator and their key advisors and suppliers. The relationships are based on a shared commitment to deliver continuous improvements in

performance over periods of several years, and are enabled by purpose-designed systems of governance.

This requires much greater transparency between the parties and commercial relationships that lead to significant consequences for poor performance – and reward for good.

Project 13 relies on accurate and objective measurements of performance – day-to-day effectiveness and outputs and outcomes – to support the commercial agreements and direct the efforts of the team towards continuously improving their performance.

Organisation

Core principles

The integrated enterprise is aligned with the outcomes to be delivered

The enterprise integrates the required capability in high-performing, collaborative teams

Supplier capability is engaged early in developing solutions

Maturity matrix

Simple collaboration

Collaborative supply chain strategy in place.

Cost-reimbursable contracts with financial incentives.

Successful combining of skills from each organisation to meet the specific challenges.

Integrated functions and relationships

Key suppliers procured through frameworks based on mutual understanding of delivery against demand.

Incentivised contracts with sustainable performance targets that reflect the joint and mutual outcomes of the integrated organisation.

Long-term collaborative partnerships to jointly develop skills required for the specific challenges.

High-performing enterprise

Supplier inter-relationships are mature enough to deliver combined innovative solutions that achieve whole-life outcomes.

Single enterprise focused on and rewarded for delivering customer outcomes. Enterprise rewards depend on performance measured against joint, shared outcomes.

Environment created to proactively develop and retain talent.

Insight

New structures will support collaboration

Organisation under Project 13 means not just good organisation but building new structures that will support coalitions of suppliers with aligned commercial interests.

The entities forming an enterprise must be fully aligned with the outcomes they're tasked to achieve. These must be clearly defined at the outset.

Hence, enterprises require the integration of management functions, systems and information.

Integration requires investment and time to develop collaborative relationships. This is important to build commitment and steadfastness among the individual organisations making up the enterprise, enabling them to support each other to build capability, develop mutual understanding, grow trust, and understand their respective strengths and weaknesses.

Early adopters of Project 13 may need to consider how organisational maturity can be accelerated.

While the functional alignment of different entities' systems and management information is relatively straightforward, the development of behavioural alignment presents a significant challenge.

This will require specific identification of behaviours and how they blend and interact for high performance and alignment to a maturity roadmap.

Tom Brancati
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Overview

Effective teams are networks of collaborative relationships that encourage an exchange of knowledge and capabilities to drive improvement and innovation.

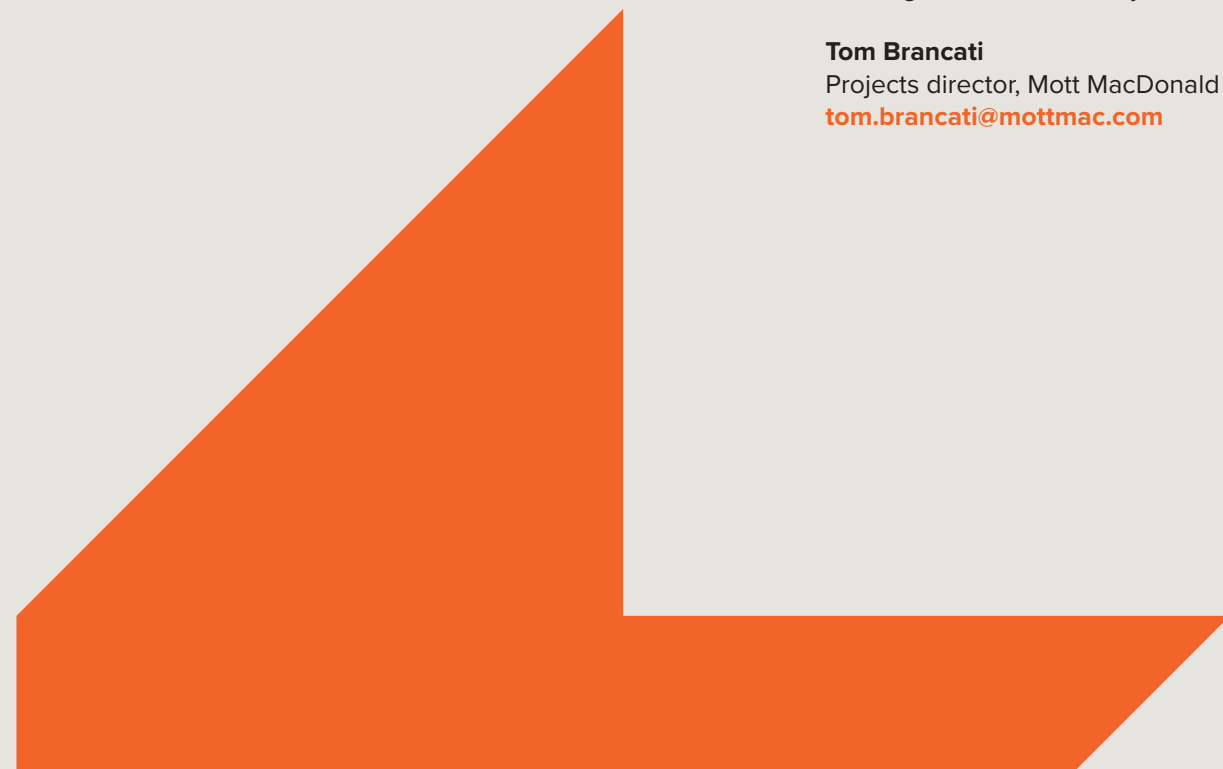
Owners should take the lead in designing coalitions of suppliers to deliver their programmes and should not allow their supply chains to be the consequence of a series of traditional procurement decisions.

The new approach relies on aligning the activities, behaviours and interests of owners and suppliers as they work together to achieve the required outcomes.

All parties must commit to these relationships and work hard to maintain them. The commercial arrangements between the parties must reflect this aspiration.

This requires owners to define the outcomes to be delivered by their suppliers. They must be able to describe what good infrastructure is, how it must perform and what it should cost. And they must be able to set realistic performance targets in terms of speed of delivery, efficiency and carbon reduction.

The owner's property, HR and IT departments need to be engaged as early as possible in setting up the team. Collaborative teams have to establish themselves and deliver quickly and they need an organisation they can rely on.



Integration

Core principles

The integrator brings together capabilities that translate effective solutions into platforms and production systems

Supply systems are organisationally and commercially aligned with the outcomes to be delivered

The enterprise has a common and committed approach to health, safety and wellbeing

Overview

The role of the integrator is fundamental to the success of the new delivery approach. It is a leadership role focused on creating an effective team to achieve common goals. It requires deep knowledge of the companies involved in the programme and their capabilities, methods, business models and objectives.

The integrator also needs to bring capability in:

Programme management – The integrator owns the key planning and management processes that co-ordinate design, manufacture of components and production across the end-to-end delivery process, and ensures they are aligned with achieving the required outcomes. The integrator has to be expert in these functions, from owning the integrated engineering model to managing logistics and providing production systems to assemble the project on site.

Maturity matrix

Simple collaboration

Internal procedures and systems exist and partially applied.

Application of R&D and innovation is incentivised in the commercial relationships, which are aligned to outcomes.

Integrated functions and relationships

Single integrated project organisation. Core teams co-located and using common systems.

Complementary R&D programmes exist across partnering organisations, aligned to delivery of overall outcomes.

High-performing enterprise

Integrated teams, systems and tools support the creation of an environment which encourages the aligned behaviours necessary to deliver the outcomes.

Single joint R&D programme for the enterprise is aligned to outcomes, jointly prioritised and delivered, with shared investment and rewards based on improved performance.

Insight

Integrator requires a combination of skills

The integrator required by Project 13 is a delivery leadership role (ie programme manager). But major programmes are characterised by high levels of complexity. The governance, management, behavioural and technical competency required to manage the endeavour is rarely found in a single organisation, certainly not in a single individual.

It is very likely that an effective integrator will be some form of delivery vehicle consisting of a number of specialists. The integrator requires a combination of engineering, management and construction delivery skills. The culture, behaviours and approach to risk of organisations currently carrying out these requirements, largely contracted separately, are very different.

Development of an integrator contract model, which recognises these different commercial and risk approaches, would greatly improve the market's ability to construct these delivery vehicles.

Where effective joint venture organisations are formed, and the role of the integrator understood by all parties, the ability for improving outcomes will be a step change in moving forward complex projects and programmes.

Dan Phillips

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Production management – Project 13 can enable a highly streamlined circular process whereby the designer produces a repeatable product which can be assembled efficiently and meets the needs of the end client. The value in production management is through the repeatability and optimisation of all stages of the product lifecycle.

Information management – Good information management supports the identification of new opportunities, reducing risk and improving adaptability, driving better business performance. It results in increased effectiveness and productivity, better quality and overall improved whole-life asset value.

There is no single way of providing integration, and no single company brings all this capability yet, so there will need to be collaboration to provide it.

Digital transformation

Core principles

The enterprise digital transformation strategy enables an integrated approach to delivery and asset management

The enterprise effectively integrates engineering and digital technology to deliver intelligent solutions

Maturity matrix

Simple collaboration

Data provides some insight on value for the customer and stakeholders.

Commitment to digital transformation with the owner's digital strategy sponsored by senior leader.

Physical assets are specified, with digital tagged on in separate or siloed systems.

Value of information recognised but not linked to business outcomes.

Integrated functions and relationships

Customer-led culture developing to understand customer needs, both expressed and implied.

Strong digital leadership across owner and partners, who are empowered to drive change. Coherent digital strategies in place.

Leading investments delivered as integrated physical-digital systems.

Business models recognise value, cost and obligation to maintain quality of information throughout asset life.

High-performing enterprise

Deep understanding of customer and other stakeholder needs and wants, which are at the centre of all investment decisions.

Joined-up leadership across the enterprise drives fully integrated strategy for digital transformation.

All investments maximise lifetime value from integrated physical-digital systems.

Information assets – the 'digital twin' – considered as essential and of equivalent importance to corresponding physical assets.

Insight

Sharing data will improve asset performance

The Project 13 approach requires understanding of how to make better use of information to deliver value.

Infrastructure owners recognise there is a huge opportunity to make better use of their data to drive better decisions, delivering efficiencies and unlocking value for all stakeholders, including the ultimate customers.

Benchmarking against best-in-class performance will help infrastructure owners to identify priority actions that will deliver value – through better understanding their customers, risks and asset performance, and developing new ways of working built on effective information management.

Measuring culture, skills and behaviours will enable the capable owner to shape their enterprises for success. And, of course, benchmarking data also provides the basis to evaluate performance and allocate rewards within a new, outcome-driven commercial model.

There is huge value in sharing information across the industry, worth an estimated £7bn a year to UK infrastructure, enabling increasing connectivity and common benefit between different asset owners.

Breaking down data silos will help us to understand the true whole-life performance of assets, and to identify more efficient ways to deliver the desired outcomes.

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Overview

Project 13 embraces opportunities offered by digital technologies to transform how we design and build new assets (digital delivery) and how we operate and integrate those assets with existing systems (smart infrastructure).

Digital transformation, which has to be done as a matter of strategy to realise the true benefits, requires us to rethink the connection between value and information.

If we redefine value in terms of outcomes per whole-life pound for the ultimate customers – bill-payers, fare-payers and tax-payers, then integrated physical-digital

solutions are the most cost-effective way of providing value. Better information enabling better and faster decisions will, in turn, lead to better outcomes.

The new approach to delivering infrastructure has to facilitate the adoption of digital technologies within new infrastructure and the processes of designing and building it. This is part of creating an 'information value chain' that connects outcomes and data, with decisions being the key value-adding step in between. Information must be recognised as an asset, and valued and managed as such.



**Join us in the Project
13 community**

The Project 13 community offers a platform for organisations and individuals to:

- Find out about training, support and advice opportunities
- Receive newsletters reporting programme progress
- Learn more about opportunities to input on development and become an early adopter

To join the community, email project13@ice.org.uk

Join us

Opening opportunities with connected thinking.

Talk to us: advisory@mottmac.com

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