2027

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PARIS
21-24 APRIL 2027

Sustainable
construction solutions
& technology exhibition

The entire construction
industry mobilised
to build tomorrow better

#sustainability

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SPECIAL EDITION

The construction industry rising to the challenge of sustainability

On the road to INTERMAT 2027:
the economic, environmental and societal forces
transforming the sector

COMEXPOSIUM · C-MAT · EVOLIS · DLR · LES TRAVAUX PUBLICS · FFB

Editorial

Joining forces, sustainably

Over the course of recent editions, INTERMAT has established itself as much **more than just a trade fair: a point of convergence** for all players in the sector, centred on a challenge now shared by all: sustainability. Of an environmental nature, of course, but also economic and societal, sustainability is today becoming a focal point with renewed urgency, as energy, industrial and regional balances are being profoundly challenged. **Faced with these transformations, the sector has chosen to pull together and act collectively.** This collective vision took on a new dimension in 2024, when, for the first time, **our sector chose to speak with one voice**. The signing of a joint manifesto by our five organisations marked a milestone. Since then, this approach has been strengthened and formalised, notably through the creation of **CINERGIC**, a consortium dedicated to construction site energy, which is continuing to work on behalf of the sector and embodies our ability to act together and develop concrete solutions.

In an uncertain international environment, marked in particular by the **conflict in the Middle East and its repercussions on the energy markets**, these commitments take on particular significance. Supply pressures and the sharp rise in costs serve as a reminder of the need to accelerate the transformation of our models, by diversifying energy solutions and strengthening the resilience of our operations.

This special edition is part of this initiative. It draws in particular on **the discussions held during Industry Day (Journée Filière) on 29 January 2026**, when all stakeholders -manufacturers, businesses, trade associations and partners - shared their analyses, feedback and outlooks. It thus sheds light on the transformations currently underway and fully reflects the spirit of INTERMAT: **a space for dialogue, demonstration and the breaking down of barriers**, both in France and internationally.

More than just a review of the current situation, this publication bears witness to an industry in motion, capable of structuring itself, innovating and moving forward collectively in the response to the challenges that lie ahead.

We look forward to seeing you **from 21 to 24 April 2027** at the next INTERMAT and continuing this drive together.

Until then, happy reading!

Philippe Cohet, *Chairman, DLR*

Alain Grizaud, *Chairman of the National Federation of Public Works (FNTP)*

Davy Guillemard, *Chairman of C-MAT (formerly SEIMAT)*

Christophe Possémé, *Chairman of UMGO-FFB*

Guillaume Schaeffer, *Exhibition Director, INTERMAT*

Fabien Vincentz, *Chairman of EVOLIS*

#sustainability

Sustainability has long been a key consideration for the sector. But at a time of rapid transformation, it is now taking on a new significance: that of a guiding principle to inform decisions and support transitions.

This special edition is structured around this central theme. It explores the subject from three complementary perspectives—economic, environmental and societal—which correspond to the pillars of INTERMAT 2027.

Three perspectives to shed light on the major dynamics at play and understand how stakeholders are engaging with them.

CONTENTS

INTERMAT 2027:
the construction industry's big meetup!

Every three years, INTERMAT brings together all the key players from the building and public works sectors in Paris for an unmissable event. More than just a tradeshow, it serves as a focal point for an industry in flux, facing technological, economic and environmental challenges.

Over its successive editions, INTERMAT has established itself as a major international hub for the construction industry, gathering manufacturers, contractors, engineers, distributors and decision-makers to discuss the innovations shaping the construction projects of tomorrow.

The next edition will take place from **21 to 24 April 2027** at Paris Nord Villepinte, alongside World of Concrete Europe, the European trade fair dedicated to the concrete industry. Over the space of four days, professionals from around the world will assemble to explore a comprehensive range of products and services organised around five key areas of expertise: earthmoving, demolition and transportation; lifting and handling; roads, minerals and foundations; building, civil engineering and the concrete sector; and new technologies and energies (electric, hydrogen, IoT, BIM, drones, 3D printing, etc.).

More than just an exhibition, **INTERMAT is a forum for discussion and reflection on the major transformations taking place in the sector**. Talks and round-table discussions led by leading French and international figures, live machine demonstrations, targeted business meetings, a Start-Up Village dedicated to innovation, the INTERMAT Innovation Awards to highlight the sector's breakthrough solutions, and the INTERMAT Academy, addressing training and skills development: the exhibition offers every participant the tools to understand market trends and anticipate future challenges.

Against a backdrop of tensions on energy markets and accelerating change within the sector, INTERMAT 2027 places **#sustainability** — environmental, economic and societal — at the heart of its approach by promoting solutions and technologies that enable construction to be carried out more efficiently, more intelligently and with a lower environmental impact.

1,200
exhibitors

including
68%
from outside France

150,000
visitors

including
25%
from outside France

130
countries represented

200
exhibitors in the concrete sector

A united industry in motion

United by a common cause, the sector's main trade associations have structured their collective action, notably through CINERGIC. Today, they are driving a shared momentum towards the transformation of construction sites and equipment.

The former SEIMAT (Association of International Construction Equipment Businesses), now known as C-MAT, has embarked upon a transformation to better reflect developments in the sector and strengthen its stance on contemporary issues.
It brings together all the construction equipment, services and solutions brands and construction equipment manufacturers operating in the French market, and coordinates a network of leading industrial players on the world stage.
C-MAT supports its members through the sector's transformations, particularly in the areas of the energy transition, technological innovation and changing industry practices, with a view to improving productivity and safety on construction sites, and also produces the market's reference statistics.

EVOLIS is the trade association for the construction industry. It brings together, strengthens and defends the interests of manufacturers of capital goods and production machinery, drawing on solid economic and technical expertise.
A partner recognised by French and European public authorities, EVOLIS is a member of the Federation of Mechanical Industries (FIM) and represents France on the Committee for European Construction Equipment (CECE). EVOLIS has 450 member companies spread across nearly 400 sites in France.
With a sector representing €19.4 billion in turnover, 59% of which comes from exports, and more than 85,000 jobs, EVOLIS speaks on behalf of a strategic industry.

The National Federation of Public Works brings together, through its 12 regional federations and 17 specialist trade associations, nearly 8,000 public works companies, representing around 331,000 employees and generating nationwide turnover of €51.3 billion. It works to promote the sector's development, supports companies in their operations and represents the public works sector in dealings with public authorities, particularly on issues relating to investment, the green transition and regional planning.

Founded in 1965, DLR brings together companies involved in the distribution, rental, maintenance and servicing of construction and material-handling equipment. It also includes partner associations in the fields of industrialised construction (ACIM), agricultural and landscaping equipment (FNAR) and lifting equipment (UFL). The more than 1,000 corporate members of DLR account for 70% of the sector's business volume in France, playing a key role in the distribution and use of equipment.

The Masonry and Structural Work Union (UMGO), part of the French Building Federation (FFB), represents 15,000 companies of all sizes. Accounting for nearly 450,000 workers and a turnover of around €55 billion, the structural works sector is a major pillar of the construction industry in France. The UMGO supports companies in their technical, economic and environmental developments, particularly regarding the challenges of physical asset performance and reducing the carbon footprint.

The prerequisites for a viable transition

The transformation of the construction sector, driven by European climate targets, hinges above all on one condition: its economic viability. Investment, competitiveness, the regulatory framework and the structuring of demand are all factors that support the transition. But everything now depends on the ability of stakeholders to put these into practice.

The European Union has set itself a clear target: **to reach net zero by 2050**. The question now is whether the construction sector has the necessary means to stay on this path.

With this challenge in mind, the construction sector finds itself at a crossroads. As a major emitter, it must simultaneously reduce its carbon footprint, **meet growing demands and continue to produce** — particularly for the renovation of existing buildings, which will account for a growing share of activity in the coming years.

A transformation that extends beyond individual players

In this system, each player has a specific role. Manufacturers design and produce the equipment, distributors ensure it is available on the market, contractors deploy it on construction sites, whilst the rental sector facilitates its distribution and accelerates its adoption.

But this well-oiled collective mechanism comes up against a reality well known to the sector: its fragmentation. In Europe, the construction industry is made up of a multitude of players, organisations and national markets, with sometimes divergent approaches. This diversity complicates the adoption of common positions, but it also reflects the sector's richness.

"There are more than sixty organisations in Brussels connected with the construction sector," points out Domenico Campogrande. "This shows how important the sector is, but also how fragmented it is. **The challenge today is to structure this diversity so that we can speak with one voice.**" This structuring is driven in particular by initiatives such as the Construction 2050 Alliance, which aims to coordinate the sector's positions at European level.

> ***« In construction, no single player acts alone: contractors, manufacturers, rental companies and clients are interdependent. Without close cooperation between everyone, the transition cannot be taken to a successful conclusion ».***

Domenico Campogrande,
Director General – FIEC (European Construction Industry Federation)

> ***« Fragmentation is not necessarily a problem per se. It only becomes a weakness if it prevents collective action. If correctly ordered, it can, on the contrary, become a strength, because it allows us to represent a wide variety of situations and needs ».***

Riccardo Viaggi,
Secretary General – CECE (Committee for European Construction Equipment)

Launched in 2020, the Construction 2050 Alliance brings together 47 European organisations from the construction sector to coordinate their positions, speak with one voice and strengthen the sector's political influence in Brussels.

From political advocacy to a more pragmatic approach

Whilst coordination between stakeholders is essential, the question of tools is just as important. The way in which the transition was embarked upon at European level is now being reassessed: the first phase of the **Green Deal** was characterised by a strong sense of determination, but also by **measures that were sometimes deemed too complex** or insufficiently grounded in grass-roots realities.

The European Green Deal sets the target of carbon neutrality by 2050. It structures the transition of economic sectors through targets, standards and funding mechanisms.

"Energy efficiency issues are not the same in Finland as they are in Portugal," points out Domenico Campogrande, highlighting the difficulty of applying uniform frameworks to highly diverse markets. This discrepancy has also been reflected in certain tools. "We have seen the introduction of highly detailed regulations, with substantial reporting and compliance requirements, which have tied up enormous resources for what is sometimes a limited environmental upside," observes Riccardo Viaggi.

In light of these limitations, a shift in approach has been initiated. "There is clearly a change in tone. The new Commission is paying much closer attention to the sector's competitiveness. The goal remains decarbonisation, but with a commitment to ensuring that the tools are compatible with the economic realities of businesses," explains Domenico Campogrande. This repositioning does not call the overall goal into question. "The European objectives remain the same. **The Green Deal has put construction back at the heart of the European agenda.** Today, we are more in a phase of adjustment than of reconsideration," confirms Carole Bachmann, Secretary General of the ERA (European Rental Association).

In practice, the sector does not dispute the framework, but its implementation. "There is a certain degree of buy-in, because it creates significant market opportunities. But if the tools are not appropriate, we risk holding players back rather than supporting them," insists Domenico Campogrande. **This adjustment phase involves, in particular, simplifying certain mechanisms.** "The Commission is much more receptive today. On sustainability reporting, for example, the threshold has been raised from 250 to 1,000 employees, which considerably lightens the burden for many businesses," he explains.

But this simplification raises a new issue: that of stability. "The point is not just to simplify, but also to ensure a degree of visibility. **Many companies have already invested to achieve compliance.** If the rules change too quickly, this could hold back investment decisions," stresses Carole Bachmann.

« Today, the issue of competitiveness is central: low-carbon equipment is more expensive, while international competition is very fierce. If this reality is not taken into account, we risk weakening European players at a time when they are being asked to accelerate their transition ».

Carole Bachmann,
Secretary General – ERA (European Rental Association)

Without demand, no transition

Beyond regulatory measures, the issue of demand appears to be decisive. “We need to stimulate the market rather than produce solutions that would find no takers,” warns Riccardo Viaggi, cautioning against the risk of replicating the imbalances seen in other sectors, such as the automotive industry. **In this regard, public procurement plays a pivotal role.** By gradually steering calls for tender towards low-carbon solutions, it not only creates a market but also drives the entire supply chain towards the transition.

But this momentum comes up against a reality: actual adoption remains dependent on the economic viability of the solutions. “Not everyone is prepared to accept a higher price,” points out Carole Bachmann, emphasising that, until demand becomes more established, securing investment will remain difficult.

The construction sector in Europe accounts for:

10,6 %
of European GDP

12 million
jobs

3,8 million
businesses, mostly SMEs

(Source : FIEC)

Public procurement: some levers already at work in Europe

In some European cities, public procurement is already acting as a catalyst for the transition. In Oslo and Gothenburg, the gradual introduction of very strict environmental criteria in tenders - the two Swedish cities are firmly committed to reducing their carbon emissions by 90% and 80% respectively by 2030 - has helped create a market for low-carbon equipment, raising awareness among stakeholders and securing investment. Contractors bidding for public contracts thus have an advantage when they use zero-carbon machinery and equipment.

On a nationwide level, the Netherlands sets the standard. Strict emissions regulations - notably based on the CO_2 Performance Scale - a management system that encourages organisations to reduce their carbon footprint - have accelerated the adoption of more sustainable solutions, whilst promoting the growth of the rental sector. This framework has also fostered close cooperation between companies, rental firms and manufacturers, facilitating the spread of innovations.

Artificial intelligence, an as-yet underexploited factor of competitiveness

Although it is still not very present in the construction sector, artificial intelligence nevertheless offers concrete prospects for productivity and optimisation. To achieve this, a major obstacle must be overcome: the structuring of data and its exploitation by individual sites.

In the construction sector, artificial intelligence is attracting growing interest but is still rarely deployed on a large scale. **One of the reasons for this is an organisational model that limits the capitalisation of data.** "Construction operates in project mode, with temporary sites that can last five to ten years. At the end, teams split up and some of the accumulated knowledge is lost," points out Grégoire Arranz, CEO of Arkance. As a result, the main obstacle is not technological, but informational.

« The fuel for AI is data. Without structured, computerised data, it is impossible to produce . Today, in the construction industry, data remains highly siloed, which severely limits its applications ».

Grégoire Arranz,
CEO – Arkance

From generative AI to agent-based AI

Generative AI currently represents the first phase of organisations adopting artificial intelligence. It offers the opportunity to analyse documents, summarise information or help with certain tasks. The next step could be 'agent-based' AI, capable of linking several actions autonomously to execute a complete process. In construction, for example, it could analyse project data, identify risks of delays and automatically suggest adjustments to improve site organisation. To develop it, however, the data needs to be much more structured.

This fragmentation explains the gap between the promises of AI and its operational reality on construction sites. Nevertheless, certain applications are already demonstrating their economic value. AI helps with the optimisation of technical choices and processes, with **direct productivity gains**. "Projects must start from the trades themselves. We identify a need, assess feasibility and profitability, then develop implementable solutions. It's not about using AI for AI's sake, but about addressing concrete challenges," explains Maxime Boyer, AI Programme Mentor & Data Scientist at Leonard (VINCI). Applications include: optimising schedules, analysing standards, supporting legal functions, and predictive maintenance, made possible by the increasing structuring of machine data.

At this stage, AI appears more like a lever for continuous improvement than a radical transformation. It helps to secure decision making and optimise operations, without upsetting the existing balances. Its effectiveness, however, depends on one essential condition: its adoption by individual trades.

« AI does not replace technical skills; it extends them, provided it is integrated into operational processes ».

Maxime Boyer,
AI Programme Mentor & Data Scientist
Leonard (VINCI)

The challenge henceforth is to advance from experimentation to industrialisation. This requires teams to develop their skills, but also a better flow of information and feedback. At this stage, the technology is ready. What remains is to establish the conditions for its deployment.

Equipment and rental: an economic balance under pressure

Following a difficult 2024, the construction equipment market is beginning to return to growth. At a time of forced investment, rental is emerging as a key lever for maintaining the sector's competitiveness.

The construction equipment market remains a direct indicator of the sector's health. Linked to investment cycles, it determines companies' ability to replace their equipment and incorporate the innovations necessary for the transition.

In an environment still marked by recent pressures — inflation, rising borrowing costs and supply chain disruptions — the European market is now showing signs of levelling off. In 2025, **sales rose by around 5%**, despite economic conditions remaining fragile. "The European construction machinery market is expected to continue its moderate recovery in 2026, driven by housing, civil engineering and maintenance. However, tariffs, labour shortages and supply chain pressures remain significant risks," emphasises Riccardo Viaggi, Secretary General of the CECE.

This recovery, however, is more akin to a catch-up than a genuine revival in demand. As such, the issue of investment becomes central.

> ***« The challenge for businesses is to strike the right economic trade-off between investment in technology and rising construction project costs ».***

Xavier Neuschwander,
Chair of the Technical and Innovation Committee – FNTP

This is because the sector's transformation relies on increasingly expensive equipment, particularly for low-carbon technologies.

And this factor reinforces the role of equipment rental. With a turnover of nearly **€34 billion** in Europe, this model — which facilitates access to equipment and allows for investment costs to be smoothed over time —has the wind in its sails.

> ***« Around 80% of machines are hired out today. Rental companies are ready to support market developments, but the economic equation remains crucial to ensuring the uptake of new technologies ».***

Philippe Cohet,
Chairman – DLR

Ultimately, visibility remains limited during this transition phase. "The sector must take the strain of high investments and relatively low machine volumes. **That is why it is essential to maintain a long-term economic vision**," concludes Davy Guillemard, Chairman of C-MAT.

ECONOMIC SUSTAINABILITY

INTERMAT 2027: debating the economic conditions of the transition

At the heart of the industry's concerns, economic sustainability is emerging as a key condition for the transition. Investment capacity, equipment competitiveness, usage models: these are all practical questions the sector must address. In this regard, INTERMAT stands out as a central forum for debate, convergence and structuring.

« INTERMAT 2027 will provide an opportunity to compare experiences, highlight existing solutions and, above all, identify the conditions under which they can be rolled out across the sector, with business models that are viable in the long term ».

Guillaume Schaeffer,
INTERMAT Exhibition Director

Economic sustainability: highlights at INTERMAT

Industry Forum

Dedicated to trade organisations, the Industry Forum aims to facilitate international-level exchanges between manufacturers, contractors and users. A series of talks and panel discussions will bring together experts and decision-makers to discuss issues surrounding competitiveness, business models and the transformation of the sector.

Business meetings

Designed as an operational catalyst, the business meetings programme offers a free service for arranging appointments between exhibitors and trade visitors. Organised in advance, these targeted meetings help to optimise networking, structure discussions and effectively maximise business opportunities.

The rise of multi-energy

On construction sites, environmental sustainability is already being reflected in changes to practices and very clear choices, particularly regarding energy. The sector is moving towards solutions tailored to specific uses, based on a multi-energy approach.

The construction industry's environmental transition is currently impacted by an array of **conflicting pressures**. On the one hand, **severe budgetary constraints**, which fuel the dilemma between 'saving the planet and saving money' and limit investment capacity. On the other, **energy sovereignty issues**, exacerbated by geopolitical crises that highlight the need to secure supplies and **accelerate the transition process**.

In this uncertain landscape, which both slows down and accelerates the transition, Europe is staying the course notably through the **Green Deal**. Environmental sustainability is thus emerging as an **operational requirement** for the entire sector in very tangible ways: through the **extension of the useful life of equipment and materials, and through the development of approaches to maintenance, reuse and retrofitting**.

« Environmental sustainability also requires changes in practices: driving aids, eco-driving, utilisation rates, and idling control. On some of these issues, we are seeing serious traction, particularly in the Nordic countries, where certain features are adopted by up to 50% of users. In France, there is still significant room for improvement, but real progress has already been made ».

Davy Guillemard,
Chairman of C-MAT

But one of the most fundamental drivers is the energy issue. "Historically, diesel has established itself as a universal solution, capable of meeting all needs," recalls Mathieu Soulas, Director of New Mobility at TotalEnergies. Today, this model is showing its limits in the face of decarbonisation requirements.

Towards an energy mix tailored to real-world constraints

These developments require powertrain solutions to be adapted to specific uses. **Electrification is now the most advanced solution**, driven by technological progress and economies of scale in battery technology. "But it cannot be rolled out across all market segments," explains Pascal Petit-Jean, Secretary General of C-MAT, particularly for **logistical and usage-related reasons** (see page 14). This is why decarbonisation must necessarily be based on a **multi-energy approach**.

Biofuels, particularly HVO, offer an **immediately available alternative** that requires no changes to engine technology, despite limited resources (see page 17). Hydrogen offers potential for certain high intensity applications but continues to face **technical and economic constraints**.

« Road transport benefits from incentives for the transition, such as energy saving certificates (CEEs), for example. The off-highway sector, however, does not yet benefit from European regulations or subsidy schemes in France. Decarbonisation therefore relies on grassroots initiatives, combining electric vehicles or batteries with biofuels such as HVO, which allows owners to adapt to different use cases ».

Mathieu Soulas,
Director of New Mobility, TotalEnergies

The diversity of these solutions requires trade-offs. "Zero carbon energies remain scarcer than petroleum. This means that supply chains need to be formed and choices made depending on the intended use," says Xavier Neuschwander, Chair of the FNTP Technical and Innovation Committee, who reiterates the FNTP's strategic recommendation: choosing electric for small machinery and biofuels, particularly HVO, for the heaviest equipment.

With CINERGIC, the industry reaches a collective milestone

By structuring dialogue with government authorities, the alliance has successfully turned technical challenges into tangible first wins.

Created on the initiative of C-MAT, the DLR, EVOLIS, the FFB, and the FNTP, CINERGIC – the Consortium of INterest for EnERGIes on Construction sites - formulates a **collective industry response**. Its aim is to bring consistency to issues that were previously addressed in isolation — biofuels, electrification, access to energy, financial support — by bringing together all stakeholders to **develop shared positions**.

This collective effort initially took the form of **a campaign to raise awareness among public authorities**. "A mini-excavator and a heavy excavator address entirely different needs," explains Richard Cleveland, Construction Group representative at EVOLIS. "This reality, long overlooked, has been at the heart of the dialogue with the government and (energy and environment agency) ADEME." This approach has helped to **take better account of the wide variety of site conditions** and avoid inappropriate one-size-fits-all approaches.

> ***« The work carried out within CINERGIC shows that we cannot impose solutions through standards without factoring in the actual conditions of use. Without the right energy infrastructure, and without the mechanisms benefiting from long term visibility and stability, it simply won't work ».***

Philippe Cohet,
Chairman of DLR

Beyond its visibility, CINERGIC has enabled the sector to organise itself and exert collective influence in discussions, particularly regarding the **national decarbonisation roadmap**. "Speaking with one voice has been crucial to becoming heard and credible in the eyes of the authorities," emphasises Pascal Petit-Jean, Secretary General of C-MAT.

> ***« Cooperation with manufacturers has led to genuine progress in energy savings. It has also led to training programmes being rolled out for a large proportion of staff, with tangible effects on working practices ».***

Xavier Neuschwander,
Chair of the FNTP Technical Commission

This cooperation has led to very **concrete initiatives**: access to electricity on sites, coordination between different energy sources, and adaptation of support schemes. In a sector characterised by a wide variety of use situations, the challenge now is to **make these pathways truly applicable and scalable**.

€20 million support for electric machinery: a major accomplishment for CINERGIC

The introduction by ADEME of a **€20 million support scheme** for electric construction machinery is one of the first wins resulting from the work undertaken by the CINERGIC collective. Following close dialogue between the industry and government authorities, this scheme, **open until the end of 2028**, operates on a rolling basis and aims to facilitate purchasing by funding part of the extra cost – **up to 50% for SMEs and 25% for large companies**. It covers the full scope of operations, including electric machines, the associated charging infrastructure and retrofitting projects, for purchases made from companies' own resources or in the form of a lease. Financed by surplus funds originally earmarked for electric trucks, it serves both as an operational lever and as a signal to the sector.

By kickstarting investments at a time when prices remain high and volumes are low, it addresses a key challenge: **overcoming the initial hurdles in the market to set in motion a broader roll-out**, before other schemes take over, among which energy saving certificates.

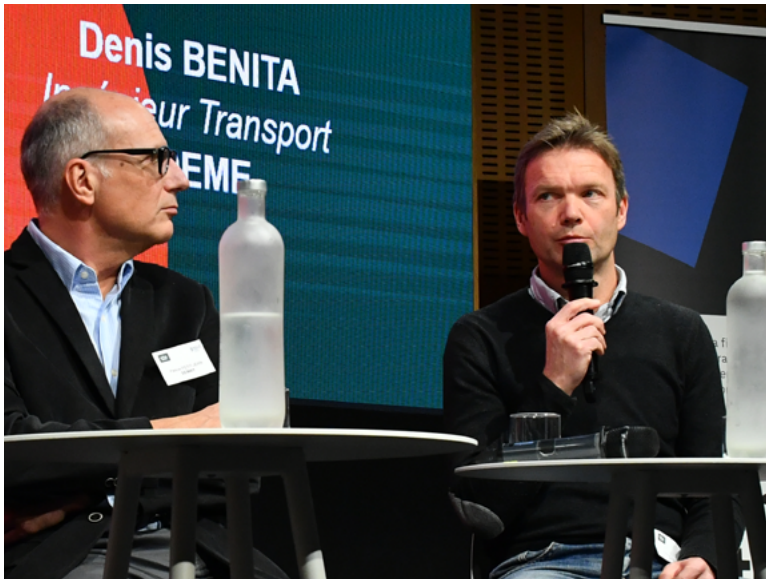
Electric equipment: the challenge of scaling up

The range of electric machinery available for construction sites has expanded rapidly and now covers most applications. However, its deployment remains limited. Between higher upfront costs, energy constraints, a lack of market benchmarks and an unstable regulatory framework, its adoption faces several well identified barriers. The challenge is no longer technical, but systemic: creating the conditions for scaling up.

On paper, things have started rolling. The range of electric equipment has indeed expanded considerably in recent years and now covers **most segments of off-highway mobile machinery**: mini-excavators, wheeled or tracked excavators, compactors, and certain material handlers. “This structuring of the market represents a clear shift,” explains Mathieu Armengaud, Head of Maintenance, Safety, Environment and Quality at the DLR. “**The sector is no longer in an exploratory phase but is resolutely moving towards industrialisation**: the solutions are there, identified and accessible.”

This is not just a theoretical trend. Pilot projects, entirely conducted with a broad range of electric machinery, are becoming increasingly common, often with the support of rental companies that facilitate their deployment. These demonstrate that, with the right organisational approach, **the same performances as with combustion engines can be attained, whilst significantly reducing emissions and noise pollution**.

However, this maturity has not yet translated into widespread adoption. “Electric equipment currently accounts for less than 1% of the total market volume,” notes Pascal Petit-Jean, Secretary General of C-MAT. There is therefore a clear disconnect between an established supply side and a market that remains hesitant. How can this apparent paradox be explained? “The sector is ready to commit – and some are already doing so – but several hurdles still stand in the way of scaling up,” continues Mathieu Armengaud.



Extra investment costs: a major obstacle to the development of electric vehicles

The first obstacle is, of course, financial. “Electric vehicles currently cost between two and two-and-a-half times more to buy than their combustion engine equivalents,” points out Denis Benita, a transport engineer at ADEME. This additional cost has a direct impact on investment decisions (see box on page 15), in a sector where margins are tight and payback periods are long.

« In terms of electric machinery, we are in a start-up phase. Volumes are still too low to generate economies of scale, and this is precisely what is stopping costs from trending lower. The process must now be set in motion: the more the equipment is used, the more affordable it will become, and the more the market will be able to adopt it in the long term ».

Pascal Petit-Jean,
Secretary General of C-MAT

Added to this constraint is the difficulty in forecasting equipment profitability. Given the lack of sufficient volumes and consolidated feedback, the economic equation remains uncertain, which holds back investment decisions.

« The central issue remains that of economic balance. Companies may be willing, and the technologies available, but if the numbers don't add up, deployment will remain limited. We must accept that the transition comes at a cost, but also create the conditions for it to become sustainable in the long term ».

Jean-Claude Fayat,
1st Vice-Chairman of EVOLIS and Chairman of FIM

Thus, whilst the issue of price remains central, other factors may explain the slow roll-out of electric equipment.

Electric machines: looking beyond the purchase price

Cost is often the first obstacle mentioned. However, to properly assess the economic case for electric equipment, the comparison cannot stop at the purchase price alone.

- **A significantly higher purchase price:** electrical equipment remains around 2 to 2.5 times more expensive than its combustion engine equivalents, which weighs heavily on investment decisions.

- **Potential operational savings:** reduced maintenance, improved energy efficiency, or suitability for certain urban applications with specific constraints can help to rebalance the analysis over the long term.

Nevertheless, this holistic approach remains difficult to assess objectively. The lack of hindsight, the absence of consolidated feedback, and decision-making that is still largely focused on the purchase price explain why companies are proceeding with caution.

Energy management: the pivotal issue

A real turning point lies in energy supply and management on construction sites. Switching from diesel to electric power is not simply a matter of replacing one piece of equipment with another. It requires a complete rethink of the project's organisation: power supply becomes a key variable on the site, which must be planned for, scaled and secured. Whether through a direct connection to the power grid or the use of portable batteries or generators, several options exist, but none stands out as a universal solution.

« We face very different situations from one site to another: urban or remote environments, short-or long-term projects, and varying access constraints. In this context, no single solution can be imposed. Contractors must adapt their responses and make do with technical solutions, some of which are still being dependability tested ».

Mathieu Armengaud,
Head of Maintenance, Safety, Environment and Quality – DLR

The key – and underutilised – role of project owners

Another, more structural, obstacle lies with clients. For whilst solutions exist and the sector is ready to commit, **their deployment remains largely dependent on the clients' ability to embrace them**. In practice, however, a disconnect persists: many display their ambitions, but it often remains vague how they will be implemented. As Julien Beideler, Secretary General of UMGO-FFB, points out, the difficulty stems largely from a lack of understanding of how to proceed: "Project owners are still struggling to take a stance: what equipment to deploy, when, under what constraints, and with what impact on site organisation?" Compounding this uncertainty is the lack of full knowledge of what is at stake. **Site logistics, particularly energy management, are often seen as the sole responsibility of contractors, and yet they directly determine the feasibility of the proposed solutions.** It is precisely at this level that the main lever for action lies.

> ***« The real lever is the contract specifications. If the requirements are not clearly formulated, measurable and enforceable, contractors will be in a grey area. It is not enough to simply state an environmental ambition: it must be translated into concrete terms, in the right detail, otherwise solutions exist but are not put into practice. This is how scaling up will happen »***

Julien Beideler,
Secretary General of UMGO-FFB

Thus, for lack of clear guidelines, initiatives remain isolated, dependent on a few pilot schemes or proactive initiatives.

A still-unstable framework, caught between incentives and uncertainties

Added to these obstacles is an environment perceived as unstable. While support schemes do exist — grants, calls for projects, investment support schemes (see page 13 and the focus on CINERGIC) — they lack clarity and guaranteed continuity. The industry regularly points to the 'stop-and-go' effects of public policy — such as those seen with low-emission zones in France (ULEZs) — which complicate investment decisions and hinder collective learning. "If one factor in the equation is zero, the whole becomes zero," sums up C-MAT chairman Davy Guillemard, pointing to the lack of overall clarity.

The proof is in the pudding: the feasibility of electric solutions is no longer in doubt. What happens next will depend on the collective ability to remove the identified barriers: structure business models, secure access to energy, clarify market requirements and stabilise the framework for their adoption.

Biofuels: HVO, a credible solution… on certain conditions

In an energy model now based on complementarity between solutions, biofuels offer a short-term operational solution for decarbonising existing internal combustion engines. Among these, HVO (Hydrotreated Vegetable Oil) is gradually establishing itself as the most credible solution: compatible with the majority of the fleet and suited to on-site constraints. Its deployment, however, remains subject to resource limitations and cost constraints.

Whilst electrification is gradually establishing itself as a key pathway to decarbonising construction sites, it does not yet cover all applications. As soon as power requirements increase, job durations lengthen or access to energy becomes more difficult, combustion engines remain unavoidable.

Given this reality, the clear conclusion is that combustion engine machinery must be decarbonised. “This approach may come as a surprise, but it is based on sound technical findings shared within CINERGIC,” says Laurent Puybaret, Head of the Technical, Health and Safety Department at FICIME.

Acting on energy without changing the machinery

Biofuels indeed offer a significant advantage: they help reduce emissions without, in principle, requiring changes to existing equipment, as they can be used under conditions similar to those for diesel. To verify this, the sector conducted an assessment of various alternatives, notably B100, a biofuel derived entirely from rapeseed, and HVO, a biofuel derived from waste vegetable oils. “This appraisal was organised collectively within CINERGIC, by evaluating these biofuels against highly practical criteria such as compatibility with existing engines, international availability and temperature stability,” explains Laurent Puybaret.

Following this analysis, certain solutions were gradually ruled out. B100, in particular, had significant limitations. “It required modifications to vehicles and posed certification challenges,” explains Dominique Chevillard, Technical and Research Director at the FNTP.

« Internal combustion engines have seen big improvements, particularly in terms of reducing pollutant emissions. Fuel consumption has also fallen sharply. Substantial emissions reductions have been achieved between a machine from ten years ago and a more recent model. The scope for further progress now lies more in the energy inputs used. In this respect, biofuels appear to be a solution that can be implemented immediately ».

Laurent Puybaret,
Head of the Technical, Health and Safety Department, FICIME

« Unlike other biofuels, HVO behaves very similarly to petroleum-based diesel. This similarity is not merely a technical detail. It determines the entire use chain, from homologation to operation, meaning that for medium and heavy-duty vehicles, HVO can be used in 99% of existing internal combustion engines ».

Dominique Chevillard
Technical and Research Director at the FNTP

Supply simplicity

In addition to this technical advantage, there is a major operational benefit: **ease of deployment**. “As a liquid fuel, HVO fits into existing ‘side by side’ supply chains – directly from the truck to the machine – and does not require specific infrastructure, unlike other energy solutions,” explains Mathieu Soulas, Director of New Mobility at TotalEnergies. This immediate availability makes it a solution that can be implemented straight away, particularly in situations where implementing alternatives is still difficult.

This operational suitability relevance must not however obscure the structural limitation of the resource’s availability.

« HVO belongs to the family of second-generation biofuels, produced from waste with no other use — used cooking oil, agro-industrial residues, animal fats. This is a clear advantage over first-generation biofuels, which compete with food crops. However, this resource remains limited: at present, it accounts for only 1 to 2 per cent of the market ».

Mathieu Soulas,
Director of New Mobility, TotalEnergies

This pressure on the resource supply is exacerbated by **competition between different uses**, as HVO is also in high demand in other sectors, notably aviation and shipping.

A tax framework to be stabilised, additional costs to be borne

The other key variable is economic - because HVO is expensive. “Without tax incentives, the price of HVO can be around two to three times higher than that of conventional diesel,” points out Dominique Chevillard. “But with the right tax regime, the difference can be limited to around 10–20%.” Even though, over the infrastructure’s lifecycle, the impact of the additional fuel cost remains limited, “stabilising the regulatory and fiscal framework appears to be an essential condition for supporting its roll-out,” says Mathieu Soulas.

This leaves the question of acceptability among clients. Philippe Cohet, president of the DLR, highlights a persistent gap between the sector’s capacity and demand: “Even with the price of the fuel only being 10 to 20 per cent higher, many project owners are not ready to take the plunge”, whereas contractors and rental companies are already on board. The issue is therefore no longer whether HVO works, but **who is prepared to bear the extra cost**.

HVO: a resounding ‘Yes’, but...

Benefits

- **High compatibility with existing engines:** up to 99% of vehicles for certain ranges
- **Similar to diesel:** no disruption to usage or maintenance
- **Liquid fuel:** simple logistics, suited to site constraints, with ‘side by side’ refuelling
- **Immediate deployment:** no need to build specific infrastructure
- **Reduced emissions:** direct impact on existing combustion engine machinery

Limits

- **Limited resource:** production dependent on limited waste availability
- **Competition for resources:** the aviation and shipping sectors also use it
- **More expensive than diesel:** reliance on tax incentives to remain competitive
- **Not a universal solution:** cannot meet all energy needs

INTERMAT 2027: solutions put to the test

As the transition gets underway, the question is no longer one of identifying solutions, but of deploying them. Electrification, biofuels, hybrid energy systems, changing practices: the levers are now known, but their widespread adoption remains dependent on their ability to adapt to the diversity of construction sites and to **achieve economic viability**.

INTERMAT stands out as a platform for scaling up: a space where solutions and innovations are showcased, compared and discussed collectively, in order to clarify the conditions for their deployment.

« The construction machinery sector operates on relatively low production volumes—in the range of a few hundred to a few thousand machines—which limits the benefits of industrialisation. Nevertheless, the transformation underway is forcing us to change scale. The challenge is to broaden the offering by covering more types of machinery, but also to develop it in depth, with ranges capable of meeting the diversity of uses — in terms of power, autonomy and site conditions. In this regard, INTERMAT plays a key role in showcasing these solutions, testing them in real-world conditions and supporting the structuring of the market ».

Fabien Vincentz,
Chairman of EVOLIS

Environmental sustainability: highlights at INTERMAT

INTERMAT Innovation Awards

The INTERMAT Innovation Awards highlight **solutions that contribute to the sector's major transitions**. By recognising innovative equipment, technologies and services, they help shape market standards and raise the profile of the most advanced solutions, within a framework recognised by the entire industry.

Start-up Village

The Start-up Village showcases **emerging solutions addressing the challenges of decarbonisation and the transformation of construction sites**. Designed as a space for engagement and exchange, it facilitates interaction between start-ups, manufacturers and end-users, and promotes the emergence of new approaches, closely aligned with operational needs.

INTERMAT DEMO

The demonstration zone is **one of the show's flagship attractions**. In a dedicated outdoor space, machinery is showcased under real-world operating conditions, allowing for a practical assessment of equipment performance, particularly that of electric or low-carbon equipment, and its ability to meet the operational constraints of construction sites.

Attracting, training and retaining staff: a structural challenge for the construction sector

Despite massive recruitment needs, the construction sector is still struggling to attract qualified workers. Less a problem of opportunities, it is more a question of image and perception. Training, promising career paths, new-look trades: industry players are pulling out all the stops to reverse the trend.

"The issue of recruitment has become central to the entire sector. The demand is there, but we are still struggling to attract enough qualified and operational candidates." This observation, made by Jean-Claude Fayat, First Vice-Chairman of EVOLIS and Chairman of the FIM, sums up a reality now widely acknowledged: **labour shortages, far from being temporary, are long term** and apply across all trades, from on-site roles to management positions.

This situation is not due to a **lack of opportunities**, but rather to a lack of appeal. Long associated with demanding working conditions, the construction industry is still struggling to revamp its image. Added to this is **increased competition between sectors**, in a context where companies must attract candidates who are increasingly in demand. Retirements and the rapid evolution of the skills required further exacerbate these pressures.

Raising the profile of meaningful professions

Yet the sector has real strengths that are still not sufficiently visible. Jobs in construction offer significant career opportunities, prospects for rapid advancement and the chance to participate in concrete, locally rooted projects.

This disconnect between the reality of these professions and how they are perceived is now a key challenge for the sector. To address this, stakeholders have embarked on a fundamental overhaul of their practices, utilising several complementary approaches.

In France, a construction sector under pressure:

1,5 million employees (AFPA, 2024)

1 in 3 companies hires career-changers

210,000+ new hires each year (AFPA, 2024)

13,3 % women in the building sector

73 % of hires considered difficult (Construction Industry Observatory, 2024)

12,2 % in civil works (UCF-CIBTP, 2024)

Training differently...

Training is today the cornerstone of this transformation. Having become a strategic priority, it espouses the rapidly changing face of job disciplines. Work-study schemes are emerging as a key tool for gradually welcoming young people and ensuring their successful transition into the workforce. At the same time, career paths are evolving, with enhanced support from the moment they join the company and during their first few years. Davy Guillemard, chairman of C-MAT, points to the existence of genuine sectors of excellence and calls for greater educational efforts, whilst regretting a lack of visibility: "The sector has not yet made sufficient inroads in terms of communication, even though it lies at the heart of major challenges."

...and widening the pool

To cater to the scale of demand, companies are broadening their recruitment pools. "Today, companies are much more open in their recruitment. We are seeing people from different backgrounds and career paths joining the sector, and this is an asset for the sector provided they are properly supported," says Sébastien Ramé, Vice-Chairman of UMGO-FFB.

This approach requires tailored induction programmes, combining the acquisition of technical skills, safety training and familiarisation with industry standards. It helps to diversify profiles and refresh working practices.

Jobs transformed by technology

At the same time, the job disciplines themselves are undergoing profound change. The rise of new technologies, the digitalisation of processes and the evolution of equipment are altering working conditions. Roles are no longer solely about execution but require **increasingly hybrid technical and digital skills**.

> ***« Human capital is a key issue for our sector. To attract young people to these professions, we have to communicate better on how they have changed. Today, these are more modern, less physically demanding jobs that value initiative and autonomy. We must make this a sector of excellence, promote it more effectively, and involve colleges and training programmes more closely in this process ».***

Jean-Claude Fayat,
1st Vice-Chairman of EVOLIS and Chairman of the FIM

This evolution is accompanied by a greater focus on the expectations of the younger generations. Beyond employment conditions, candidates **express strong wishes regarding purpose, engagement and quality of life at work**. Companies are therefore seeking to highlight their contribution to environmental and community challenges, whilst developing **more attractive working environments**.

> ***« The image of our professions is changing profoundly. Young people today are turning to careers that offer meaning, practicality, innovation and pride. The main challenge now is to better support this trend, particularly by working with teaching staff, who sometimes still hold outdated views of the sector. Because the reality has changed: these professions offer solid prospects, including in terms of pay and career progression ».***

Sébastien Ramé,
Vice-Chairman of UMGO-FFB

Finally, one key challenge remains: that of staff retention. In a sector characterised by high employee turnover, the ability to offer **career progression pathways**, organise the **transfer of know-how** and recognise experience is becoming crucial. Hiring experienced staff, and setting up mentoring schemes, contribute to this approach of continuity and capitalising on skills.

Female workforce participation: untapped potential

Long seen as male-dominated realms, the building and public works sectors are gradually opening up to new profiles. Women now account for **13.3% of the workforce in the building sector and 12.2% in civil works** (UCF-CIBTP, 2024).

Although this proportion has been rising steadily over the past decade, it remains limited in relation to the sector's recruitment needs. Increasing the proportion of women in the workforce is therefore a key driver for sustainably expanding the talent pool, whilst helping to improve the image and working conditions of these professions.

When technologies tangibly transform working conditions

Machinery electrification, assistance systems and artificial intelligence: as these technologies become widespread on construction sites, they do more than just improve performance. They tangibly transform the daily lives of teams, making work environments clearer, safer and more comfortable.

And suddenly, it's all so quiet! Anyone who has ever stood near a construction site where electric machinery is at work has seen (and heard) it for themselves it: the usual noise of the combustion engine gives way to a quieter environment. A development that is tangibly changing working conditions.

« Electric equipment delivers immediate benefits on construction sites. Beyond reducing emissions, they tangibly improve working conditions: less noise, less vibration, and less disturbance to both teams and nearby residents. This change is noticeable in everyday life. The challenge today is to better highlight these benefits, which directly contribute to the acceptability of construction sites and the appeal of our professions ».

Julien Beideler,
Secretary General of UMGO-FFB

This job appeal, which lies at the heart of the challenges facing the construction sector, is also driven by other technologies. In the machinery world, driver assistance systems are becoming increasingly widespread. On-board cameras, proximity sensors, warning systems and guidance aids **make movements safer and reduce the risk of error**. Operators benefit from a support environment that enhances the precision of their movements and the safety of operations. By making it easier to assess the environment and providing real-time information, these systems allow teams to **focus on the quality of their work**.

Following on from these developments, artificial intelligence is gradually making its way onto construction sites. Its main contribution lies in the ability to anticipate better.

« Machine data is becoming increasingly structured, paving the way for predictive maintenance applications powered by AI. New services are emerging that can anticipate the maintenance work needed to prevent future breakdowns. This development is fundamentally changing how unforeseen events are managed: by limiting unplanned downtime, it reduces emergency situations and the resulting pressure on operators ».

Grégoire Arranz,
CEO of Arkance

Out in the field, these benefits are also reflected in the organisation of construction sites. Maxime Boyer, AI Programme Mentor & Data Scientist at Leonard, highlights that AI can be used to "optimise task scheduling, improve deadline compliance and ensure better project monitoring". These features streamline operations and minimise **the pressures caused by unforeseen events**.

In the same vein, AI is also involved at an earlier stage, right from the design phase. "More and more software providers are integrating intelligent assistants capable of proposing solutions tailored to the requirements expressed, whilst taking standards and regulations into account," explains Grégoire Arranz. By facilitating access to information and guaranteeing the soundness of technical choices, these tools enable teams to work with **greater clarity and confidence**.

Without disrupting existing work processes, these tools enhance teams' ability to anticipate, get organised and manage their working environment. Less vulnerable to unforeseen events and better equipped to make decisions, operators benefit from greater efficiency and better conditions in their day-to-day work.

SOCIETAL SUSTAINABILITY

INTERMAT 2027: supporting the transformation of professions and skills

As the construction sector evolves, issues relating to job disciplines, skills and working conditions are becoming increasingly important. Job appeal, new profiles, upskilling and operator safety are emerging as key drivers of the transformations currently underway. The upcoming edition of INTERMAT will provide a prime platform to highlight these developments and demonstrate their practical applications.

« Sustainability for the sector also entails the ability to transform our professions, attract new talent and support upskilling . INTERMAT brings these transformations to life: visitors can see not only the technologies themselves, but also their impact on practices, organisations and training needs. It is this broader perspective that is essential for the sector's long-term development ».

Guillaume Schaeffer,
INTERMAT Exhibition Director

Societal sustainability: highlights at INTERMAT

INTERMAT Academy

This immersive and informative space dedicated to employment and training seeks to foster connections between young talent and recruiting companies through workshops and job-matching sessions. A hub for colleges, young people and businesses, the INTERMAT Academy area showcases the initiatives led by major construction federations and training providers to promote the appeal of careers in the building and civil engineering sectors, against a backdrop of changing skills requirements.

General Public Day

As part of INTERMAT 2027, the special general public day on Saturday 24 April marks a new step in promoting careers in the building and civil works sector. This initiative aims to challenge preconceptions about the sector by highlighting its diversity, innovation and numerous career opportunities. By opening its doors to the public, INTERMAT hopes to inspire careers and strengthen the link between the construction industry and society, whilst promoting a sector undergoing rapid transformation and with a promising future.

#sustainability