

# empowering anywhere manufacturing through Greenfield business technology





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# Bringing Anywhere Manufacturing to life

Globalization offers enormous potential to any manufacturer. One way to realize this potential is through a Greenfield project, developing a new site from scratch, anywhere in the world – which can enable you to maximize operational efficiency, reduce costs and meet new standards of sustainability. Success requires fast rollout and the best IT. We enable this, through Anywhere Manufacturing.

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Your Greenfield project, if implemented correctly, will bring you enormous benefits, including the ability to target growth markets directly and access low-cost locations. Rapid rollout, and best-in-class IT, are key elements if you are to seize opportunities and answer the big issues:

- ▶ **Managing a global value chain; your new site must integrate perfectly into your global business**
- ▶ **Maintaining consistent quality when planning a new production site, whether you are using proven processes, or trying out new ways of doing things**
- ▶ **Overcoming regional and local social challenges, including educational level, age of workforce, salary and other factors that can impact on production processes and level of automation**
- ▶ **Handling local legal issues, which can include taxes, accounting, statutory reporting, creation of key documents and banking regulations. To address these you need support from local auditors and IT consultants**
- ▶ **Scoping impact of environmental conditions, such as extreme weather, that could impact on your IT infrastructure or network availability**
- ▶ **Encountering cultural differences that could affect project management style and governance**
- ▶ **Dealing with local language issues, which can affect, for example, naming conventions and printing**
- ▶ **Other variations, including available space, supplier situation, or number of product variances, will affect logistic concepts and processes.**

## Anywhere Manufacturing: integrated, seamlessly delivered Greenfield IT

Customized IT solutions that cover every aspect of your new facility, enable key processes and systems to interact efficiently.

Your Greenfield IT must be consistent and orchestrated wherever your new site is located, so your whole value chain, from production equipment to the plant manager's office, to the wider global business, is connected.

Atos Anywhere Manufacturing leverages our manufacturing and engineering heritage in order to help you achieve the design-build-operate of an optimized production environment from the ground up.

With this approach, IT is used to help you at every stage, enabling you to achieve high levels of productivity, quality and efficiency from day one. Our approach gives you simpler, smoother IT Infrastructure and Foundation IT solutions.

This includes ensuring that the critical Manufacturing Process Solutions upon which you depend such as PLM, ERP and MES are complete, integrated and fine-tuned.

We consider your critical IT from a strategic as well as an on-the-ground, practical standpoint, using our Business Technology vision to ensure your IT delivers the best possible value and efficiency at every stage.

So what does this do for you? Well, you get the benefit of our integrated vision and our ability to orchestrate IT and production equipment. Our complete approach to your IT enables you to design anywhere, build anywhere, and sell anywhere – and become perfectly positioned to enter new growth markets and outperform the competition.

Whether your focus is process industry (e.g. chemicals or pharmaceutical) or discrete (including automotive and consumer goods), you must meet these challenges in order to implement a rapid, cost-effective Greenfield project. Our Anywhere Manufacturing IT portfolio addresses this growing need.



# Orchestrating your Greenfield IT

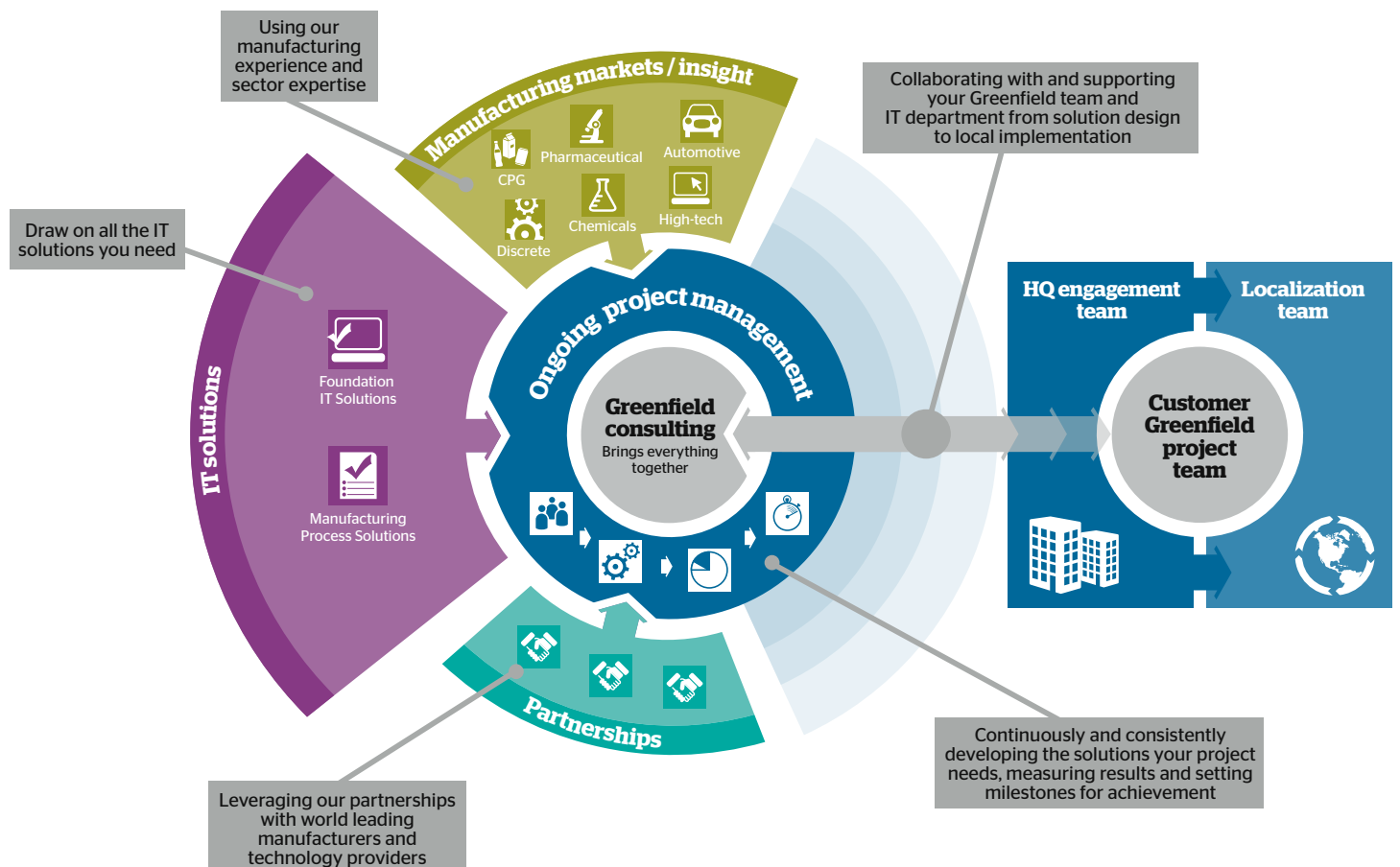
Atos has combined an exceptional range of capabilities and solutions to build a focused, proven portfolio for Greenfield manufacturing projects – giving you operational agility and speed at every point.

As your Business Technologists we understand that technology and business must be completely integrated to give you the right results in your Greenfield project. So we embed IT thinking into your new site from the start, spotting opportunities that will lead to greater speed, efficiency and seamless operations.

The Anywhere Manufacturing approach (illustrated below) orchestrates every element of Greenfield IT. Driven by consultancy, we bring together Foundation IT Solutions and Manufacturing Process Solutions for rapid implementation, operational speed and agility.

## Delivering Anywhere Manufacturing

Insight, partnerships and IT solutions orchestrated to support your Greenfield project

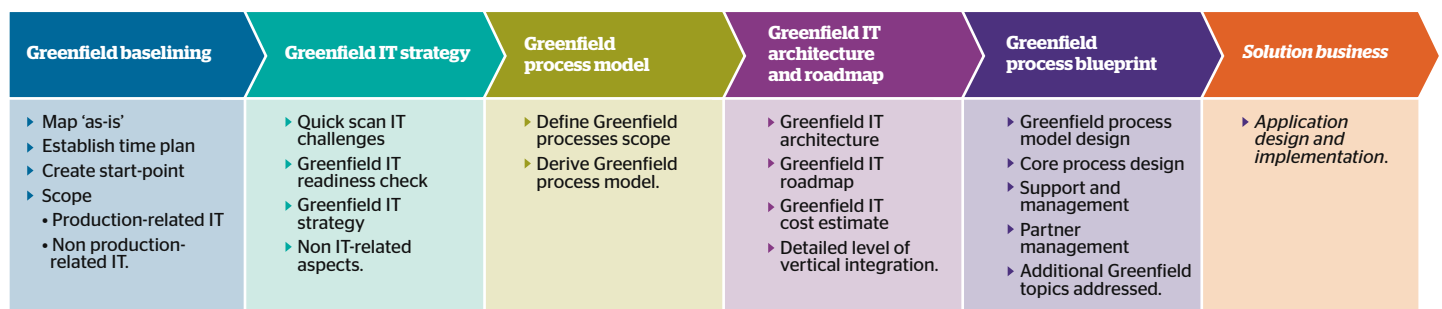


# A consultancy-led approach

Your Greenfield Business Technology team engages with you from the start until completion; evaluating, advising and designing the scenarios that will lead to the best possible business decisions.

## Greenfield IT Consulting

Bringing focus and direction to your Greenfield project rollout



**Greenfield baselining** – here we act as your 'sparring partner' – engaging with you to understand the critical issues involved in your Greenfield project. We work closely with you to discover what you really need. For instance, we might recommend that as well as a new plant, because of the needs of your workers you also require an office building on your Greenfield campus. We also establish the best 'start point' for the IT conversation (is it now, in three months – what are the key factors that must be considered?). We help you assess which of your possible sites is best from an IT perspective. And we put in place rock-solid IT PMO delivered by our expert project managers.

**Greenfield IT strategy** – even if you're seeking to mirror IT systems that have been proven in an existing plant, the conditions you're facing in your new site are unique. That means you need a specific IT strategy for every Greenfield project. We know how to address your IT challenges, and how to create an appropriate Greenfield IT strategy that fits your precise needs. We establish the cornerstones for your Greenfield IT from a business perspective, and outline what IT you'll need to make it happen.

**Greenfield process model** – gives you a 'big picture' view of the processes that your Greenfield project depends on, so that they can be implemented seamlessly and completely from the start. We work through our process map with you at the beginning, defining what's in and out of scope and ensuring that every element is considered. This ensures processes that have to work together (i.e. production systems and knowledge management) stay aligned and that your Greenfield site is as efficient and productive as you need it to be.

**Greenfield IT architecture and roadmap** – we rapidly establish how your IT strategy will be achieved. We give you the real architecture, and a true picture of the solutions that will be used to achieve what you want from your Greenfield site – using SAP here, reusing MES from another site there. This leads us to create a step-by-step roadmap of how the technology will be put in place – whether it's most efficient for example to start with supply chain, then HR – and link these to a time-frame that suits you.

**Greenfield process blueprint** – now we give you the specific way everything will be brought together – how your processes will be defined, designed, laid out, customized and shaped to ensure your new site is as productive, resilient and flexible as possible. Here we set out precisely how every step on the roadmap will be achieved, where we will need to leverage our own co-operation with technology providers – and how we will manage their input into the Greenfield project from the beginning.

# Our business solutions

Greenfield IT designed for you. We deliver the finely tuned production-based applications and processes that power your manufacturing operations and enable your new plant to get up and running rapidly.

## Foundation IT Solutions

Our Anywhere Manufacturing portfolio includes high-performing, cost-effective solutions for Workplace Management, all aspects of Identity, Security and Risk Management, Application Operations, Network and Communications, Managed Infrastructure Services, and many other key functionalities, including Enterprise Content Management and Cloud Services.

We help you to achieve true efficiency and future-proof operations, and reduce your CapEx, through resilient, fit-for-purpose IT infrastructure. We design, implement and manage the core technology environment needed to run your systems and processes with the highest efficiency and lowest cost possible.

Our leadership in global sourcing, as well as in giving customers scalability through on-demand, cloud-based services, means we can deliver the infrastructure that enables your business to succeed.

### Our Foundation IT Solutions include:

<b>Workplace Management</b>	Our Adaptive Workplace solution is independently recognized by analysts globally for its innovative and user-centric approach, which ensures that your workforce has the tools to perform, wherever, whenever and however they need to – with the right level and the right type of support.
<b>Identity, Security &amp; Risk Management (ISRM)</b>	We support you in achieving compliance and sustaining secure and uninterrupted business operations, while protecting the privacy and integrity of intellectual property and customer information across the extended enterprise. Through Identity, Access and Rights Management, we make certain that everyone in your business is allowed the right access – vital for efficiency and security. We are a true ‘Tier One’ player in security and risk management, end-to-end, with our own proprietary IP as well as global recognition for our consulting capabilities. Our experts can help safeguard your interests with the most advanced techniques, including biometric solutions.
<b>Application Operations</b>	We take on all ongoing operations of both generic and business-specific applications, handling license management and cloud pay-as-you-go models.
<b>Network &amp; Communications</b>	You need to ensure your networks keep working at business speed – and our Network & Communications expertise delivers continuous operations with absolute certainty. We ensure your networks can absorb the increased load of rich media communications, managing all aspects of unified communications including third party contracting, if desired.
<b>Managed Infrastructure Solutions</b>	Ensuring all storage and computing resources are fit-for-purpose across their lifecycle, whether owned or outsourced, embracing emerging cloud delivery and offering storage on demand through sustainable data centers. Our solutions here include our innovative ‘container data center’ approach, data storage, consolidation and virtualization of IT infrastructure and the ability to move to a fully cloud-based, scalable environment.

## Manufacturing Process Solutions

Manufacturers need the core business applications that allow them to operate efficiently. These applications, which are mission-critical to smooth, modern operations, have been brought together for you by Atos as part of our Integrated Manufacturing solutions.

Integrated Manufacturing from Atos helps you run smoothly and seamlessly, reducing costs and 'drag' from inefficiency. Here, we bring our renowned expertise in mature MES, advanced planning systems, PLM and ERP.

### Our Manufacturing Process Solutions include:

<b>Manufacturing Execution Systems (MES) &amp; Manufacturing Operations Management (MOM)</b>	Our 'top floor to shop floor' approach makes sure that your Manufacturing Execution Systems (MES) and Manufacturing Operations Management (MOM) solutions are fully integrated into your production equipment (with real-time industrial data) and your IT business systems. For your new plant we can also realize new approaches like 'just in time - just in sequence'.
<b>Product Lifecycle Management (PLM)</b>	Innovation and accelerated product development is a strategic requirement for your new manufacturing plant. Product Lifecycle Management (PLM) is key for the concept of your new plant, for facility design and engineering. According to your business goals we consult, design and implement your PLM solution - from design of your new site to managing equipment engineering and maintenance.
<b>Enterprise Resource Planning (ERP)</b>	Enterprise Resource Planning (ERP) can be a lean and highly efficient process platform in manufacturing if it is well connected with your production systems. A lean ERP system, often SAP, will be at the heart of your optimized business processes.

## How Atos differentiates

We lead the market in two key areas.

### Sustainability commitment and solutions

We help you to reduce power consumption, CO<sub>2</sub> emissions and resource usage in a resource-challenged (and regulation-filled) world. For us, sustainable technology and thinking is a core element of every project. We combine green data centers, reduced energy usage, cloud-based delivery and our leading Managed Infrastructure Solutions (MIS) both to increase yield rate and reduce waste.

We are acknowledged leaders in sustainable business thinking; our 'Ambition Carbon Free' program, for instance, saw us becoming

the first IT Services Company to report its sustainability achievements according to the Global Reporting Initiative (GRI) in 2010; and in 2012, we received an A+ rating from the GRI for the second year running. We focus on delivering leading edge performance, cost reduction and full compliance with increasingly tough regulations.

All of this increases the probability of a successful and efficient Greenfield project while also offering the opportunity of realizing (in certain markets) significant tax breaks and carbon-related benefits.

### Transforming the modern workplace

While our principal focus is the IT that lies behind successful Greenfield projects, we are also able to support you at the most

fundamental level of Greenfield project development - creating a smarter, energy efficient and sustainable working environment within your new facility. This is the role of our innovative, collaborative and connected workplace solution, jointly developed with AOS Studley (a global independent Real Estate Consulting, Workplace Consulting and Project Management Company).

Our approach brings together workplace technology and the working environment in a seamless, integrated and future-proof way.

It's a model that has been implemented in our own new headquarters in Paris - and enables us to ensure that the environments you create for your workforce are optimized for efficient, modern, safe and sustainable working.

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# Atos in action

## Process industry

### **Mobile data center - global gas company**

Atos delivered two complete 'in a box' mobile data centers to our customer, one of the world's largest manufacturers of gas and petroleum resources.

Our highly standardized Twin Data Center Container solution has been adapted for the needs of the customer - and delivered in an extremely short time frame of less than 20 weeks.

The use of our container data centers has enabled our customer to deliver much greater strength, flexibility and operational speed into their new site, at an affordable cost, and helped them to scale in the way they need..

## Process industry

### **IT infrastructure and engineering - pharmaceutical, China**

Our customer, one of the largest pharmaceuticals businesses in China, needed IT infrastructure, implementation and integration for their new site.

We delivered a complete IT infrastructure, including data centers, network systems, and the integration into the automation level - integrating data and information in real time into the new production site. The successful completion of this project has created major time and cost savings, increasing our customer's competitive advantage.

## Discrete manufacturing

### **IT systems and infrastructure - automotive, North America**

Our customer - a leader in design, manufacture and customer support in the truck subsector, needed a cohesive and comprehensive IT infrastructure in its engine plant.

Building on an Apriso FlexNet platform, we integrated four best-of-breed systems into the customer's business; we also automated ERP/PLM/MES interfaces and enabled cutting-edge data collection and analysis from machine controls and PLC/SCADA automation.

In partnership with our customer, we've created a completely new design for all core processes and ERP IT solutions for the factory. The result? A more efficient, future proof and rapid operation.

## Discrete manufacturing

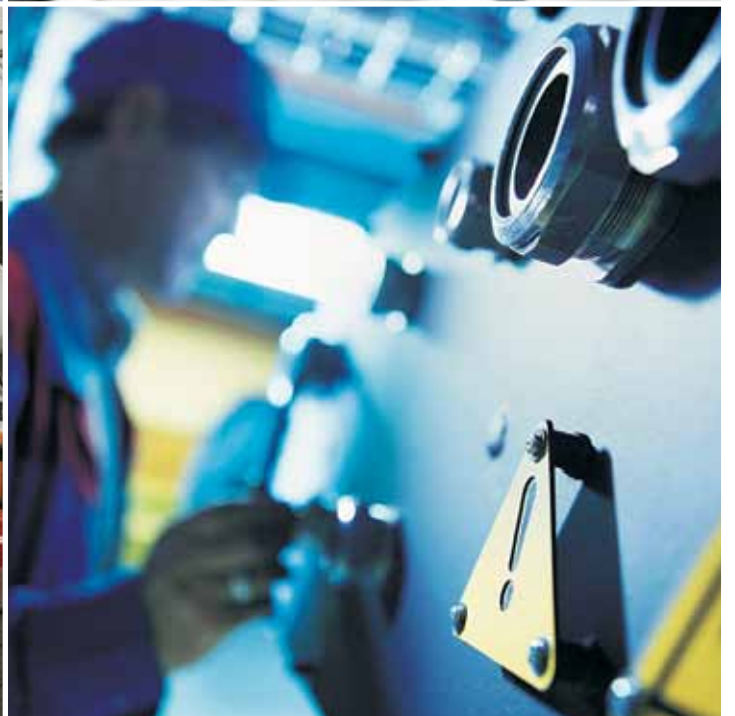
### **Layout design and process re-engineering - elevator manufacturer, Spain**

Our customer was expanding and as a result, needed to ensure its operational and logistical processes were fit for purpose in its new facility.

We were called upon to completely re-engineer our customer's production and storage areas and create a future design for a new production plant.

The result of our two-year collaboration has been a successful delivery of a design for a future-proof, scalable new production plant. This has led to improvements in terms of speed, productivity and transparency of information across the production process.





# Committed global support, from a true Greenfield partner

Your Greenfield project should open up new opportunities and provide measurable advantage. We deliver this advantage and peace of mind through extraordinary global and local capability, and true commitment to your goals.

Atos gives you the IT excellence that helps you design, build and operate your new Greenfield facility the right way. The strategic placement of our offices and delivery centers ensures that wherever you want a new facility, you can be supported globally and locally.

We know how to manage regional and local issues, from legal systems to labor conditions, power availability and other logistic challenges.

With Atos, you can be assured that every factor that could impact on technology performance will be understood and managed.

Locations in 48 countries (including all leading manufacturing centers) enable us to back you up with truly global reach and delivery capability. Our delivery centers and expert resources are on call wherever you operate, and we bring real-world knowledge and up-to-the-minute information to bear on all our recommendations.

Of course, you may already have strong internal IT resources supporting your Greenfield IT implementation. Nevertheless, Atos can add value to your Greenfield project through our global project experience, local insight, industry DNA and submarket know-how.

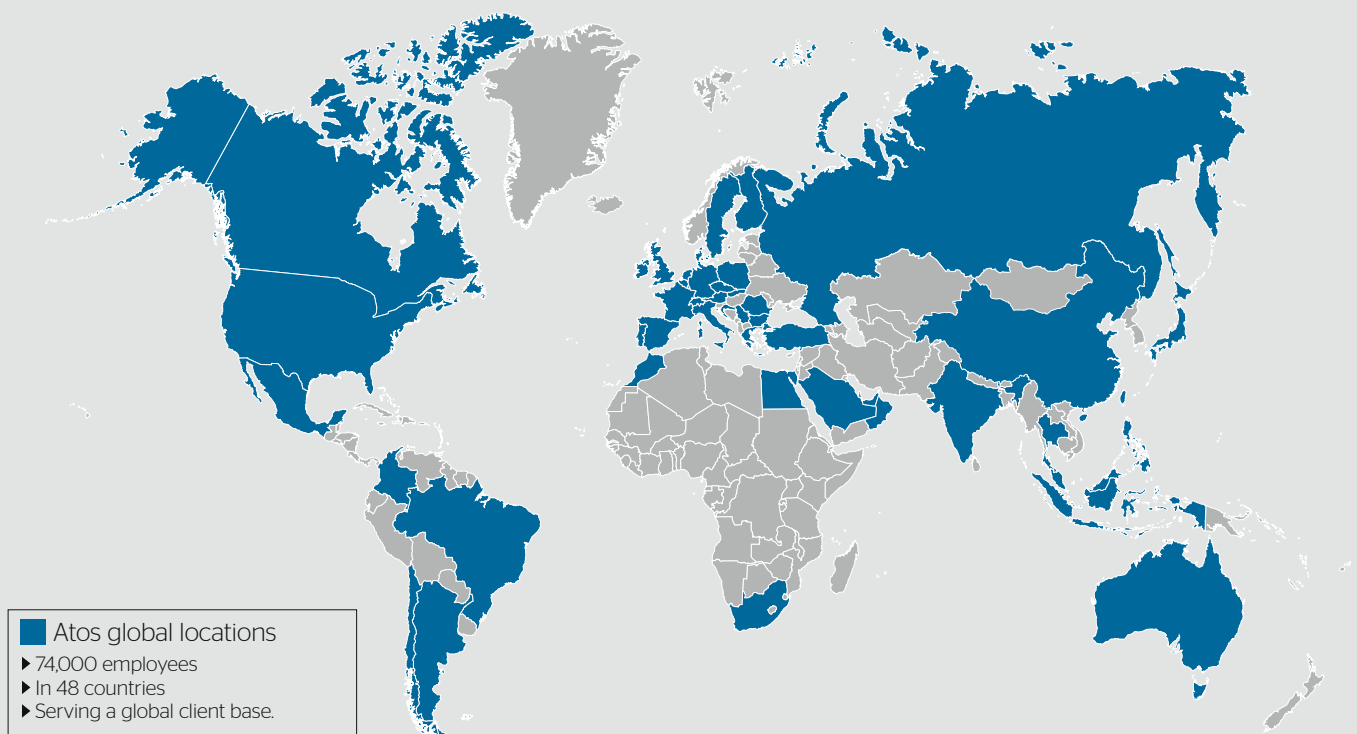
To make Greenfield a success, you need an IT partner that understands manufacturing from the inside and has mastery of all the key technology disciplines needed by world-class companies in a changing market.

An IT partner with these qualities will help to realize a Greenfield project that delivers maximum operational efficiency, positions you for new markets, and does so in a cost-effective, risk-reduced manner.

Atos is that kind of partner. Let's talk about turning your Greenfield vision into reality and turning the challenge of globalization into real growth opportunity.

## Atos global reach

Positioned to support your Greenfield project, anywhere in the world





### Atos: a partner with real manufacturing heritage

With Atos, you get a partner with the insight and expertise of an IT specialist that has the background, understanding and DNA of an engineering and manufacturing company. This comes from our considerable consulting and technology experience and know-how, as well as from our close working relationship with Siemens.

The merger of Atos Origin and Siemens IT Solutions and Services in 2011 has given our already extensive global business even greater worldwide reach and penetration of every important market.

We have more complete coverage, more complete offers, and a greater cultural understanding of local markets – a critical factor in Greenfield project implementation.

Our shared heritage with Siemens, leveraging their 160-year history of knowledge and deep industry experience, is drawn on to benefit our manufacturing customers across the globe. Together, we have a comprehensive and far-reaching knowledge base of engineering, production equipment, and IT.

We have a deep, instinctive understanding of how all the different components of your technology and IT relate to each other and fit together. This engineering heritage means that we know what your world looks like, know your business pressures, understand what you need from IT, and how to deliver it.

Our manufacturing heritage and manufacturing DNA makes us your perfect Greenfield IT partner. Our Anywhere Manufacturing portfolio brings all these capabilities together.

### More than Greenfield: meeting the challenge of Brownfield investment

As well as Greenfield projects you may be looking to repurpose existing facilities through Brownfield investment, where a previously used site is expanded/upgraded (sometimes for a very different purpose) to achieve superior return.

Atos is highly experienced in Brownfield development, and a trusted partner for global manufacturers in various industries including pharmaceuticals and automotive. We're used

to the challenges Brownfield represents in terms of consolidation, harmonization and integration of the facility into existing infrastructure (and global value chain). We're ready to support you to rapidly repurpose facilities in traditional markets and to take on the IT complexities of Brownfield, including: legacy transformation; data operations; sustainability; successful fusion of IT and production equipment;

and outsourcing of IT functions to reduce expenditure and speed up operations.

We bring our enormous experience, insight and success in Brownfield projects (with their unique challenges and requirement to continue business-as-usual even while repurposing a plant for a new use) into our complete Anywhere Manufacturing Greenfield portfolio.

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# About Atos

Atos is an international information technology services company with annual 2011 pro forma revenue of EUR 8.5 billion and 74,000 employees in 48 countries. Serving a global client base, it delivers hi-tech transactional services, consulting and technology services, systems integration and managed services. With its deep technology expertise and industry knowledge, it works with clients across the following market sectors: Manufacturing, Retail, Services; Public, Health & Transports; Financial Services; Telecoms, Media & Technology; Energy & Utilities.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. It is the Worldwide Information Technology Partner for the Olympic and Paralympic Games and is quoted on the Paris Eurolist Market. Atos operates under the brands Atos, Atos Consulting & Technology Services, Atos Worldline and Atos Worldgrid. For more information, visit: [atos.net](http://atos.net)

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