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Introduction: the manufacturing sector today

According to Deloitte's 2022 Manufacturing Industry Outlook, the five most pressing challenges facing businesses operating in the manufacturing sector, are:

- Supply chain disruption
- Labor shortages
- Smart factories
- Cybersecurity
- ESG investment

Each one of which was already in play before the pandemic hit in early 2020. All that did was to accentuate them all. And, ironically, the quicker than expected bounce back coming out of the pandemic has brought each one of them into even sharper focus. So let's begin by looking briefly at each of the above.



"Manufacturers seek an upper hand by integrating operational data for more transparency..."

Deloitte¹

"...The risks from not "connecting the dots" through available data can be significant."

Deloitte¹



1. Supply chain disruption

Manufacturers have three elements to juggle; labor, materials and fixed assets – the machinery needed. Successfully syncing your supply chain depends on making sure that all the right bits, people and pieces are in the right place, at the right time. And what that comes down to is data.

All those parts, products, machines and people produce an ever-growing mountain of data. As, more and more, every single square inch of everything has a sensor attached to it, monitoring its progress and tracking its every move.

What your software does is to gather and organize all that data in a central location, so that everyone who needs to can access all that information. So when the arrival of parts at your factory in Florida are delayed because of a driver's dispute in Michigan, you won't have to pay for people and machinery, as they sit idly on the factory floor waiting for everything to arrive.

Because crucially, all those data sets are being updated in real time. And are constantly available for everyone to have access to.

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2. Labor shortages

One of the clearest trends to emerge from the current labor market is the fact that employees want more than just a healthy salary. They want to feel that they're actively contributing and are making a difference.

One of the most common complaints you hear from workers is that they keep being assigned tasks they're clearly over-qualified for. Or, alternatively, that they were asked to do things they weren't trained for.

That's because companies are constantly taking on projects they're not capable of delivering on, because they think they can't afford to say no. So the wrong people end up working on the wrong projects, as companies struggle to cope with their workload.

You have to be able to see, at a glance, exactly what assets you have at your disposal so you can properly plan your portfolio. Only then can you competently assign and manage your projects so that appropriately qualified people end up working on the right projects.

In other words, managing your workforce depends on effective capacity planning and efficient resource management. And the only way to achieve that is with a sophisticated software package.



"We estimate a shortfall of 2.1 million skilled jobs by 2030"

Deloitte¹

3. Smart factories

Over the last decade or so, technology has transformed the way the world of manufacturing works in three key areas.

First, next generation robots now include self-driving vehicles, drones and 'cobots', robots that work in collaboration with, or next to you. As well as increasingly efficient machines that count, catalogue, store or collect, so workers are freed up to perform more productive tasks.

Then there's the fact that you now get analytics from absolutely everywhere, thanks to the Internet of Things (IoT) and the bandwidth that 5G gives us. More and more components, parts, products and machines, the things, have sensors producing reams of data, that get analyzed and organized via the Internet.

Finally, technology means that a huge amount of what gets done in manufacturing can be performed by people working from pretty much anywhere.

All of which depends on your data being managed, organized and constantly updated, in real time, so whoever needs to can see them.

"Smart factories are one of the keys to driving competitiveness."

Deloitte¹



"Automated guided vehicles and mobile robots increase factory efficiency."

Deloitte¹

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"82%

of manufacturing executives will invest more in cybersecurity in 2022."

Deloitte¹



"Remote work vulnerabilities leave manufacturers even more susceptible to breaches."

Deloitte¹

4. Cybersecurity

All the things that make smart factories possible also make manufacturing especially vulnerable to cyberattacks. The vast number of moving parts that the manufacturing process requires, and the fact that all that data can only be efficiently organized online, means that anyone can mount an attack, from literally anywhere in the world.

And, as we've all been seeing, criminal gangs are getting better and better at exploiting any operational vulnerabilities. Spyware, ransomware, malware and trojan horses are used to blackmail companies and target commercially sensitive data. Which can then be sold to rivals or used to produce fakes.

But the biggest vulnerability comes from the continued use of legacy software systems. The latest software packages are actually pretty good at keeping pace with the kind of tech employed by the criminal underworld. That's not the problem.

It's not fiendishly sophisticated technology that make them so dangerous. They're just relying on the fact that most businesses are too busy, or don't fully appreciate how important it is, to update their software.

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5. ESG investment

Environmental, social and governance factors are becoming increasingly fundamental. You need to be able to demonstrate that how you source, make and distribute whatever service or product you provide is done in a way that you can stand over.

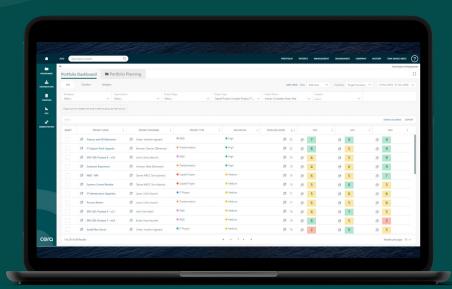
That it doesn't involve child labor or dealing with a morally reprehensible regime. That you're doing everything you can to reduce the emissions it produces. And that what you do isn't done simply to provide your senior executives with outlandish bonuses.

And the way you demonstrate all of that is with metrics. In other words, it all comes down to data.

"Investors, boards, customers, employees, and policymakers continue to focus on ESG."

Deloitte¹





Once your data is managed and organized in a centralized depository by your software, you can access any of those metrics whenever anyone asks you for them. As Deloitte concludes,

"Centralizing a manufacturing control tower can bring together data from different facilities, production lines, and equipment and visualize dependencies on suppliers and effects on logistics."

Deloitte¹

That's exactly what Cora's software solution does for you. It makes you the control tower, in charge of all that data so you can effortlessly orchestrate all of your activities. And there are three areas specific to manufacturing that Cora has been purpose-designed and built to significantly improve.

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2. Benefit one: advanced financials

Project financials are absolutely fundamental for manufacturing, more so even than schedules. As a matter of fact, a client of ours approached us not so long ago to ask whether they could take their financials and populate their schedule with them.

They'd been finding it frustratingly difficult to get their project managers to keep their schedules up to date. The PMs had no difficulty inputting their financials, their forecasts and their various estimates at completion (EACs). So they must have known how all that impacted their schedules. They just didn't get around to inputting the actual schedule.

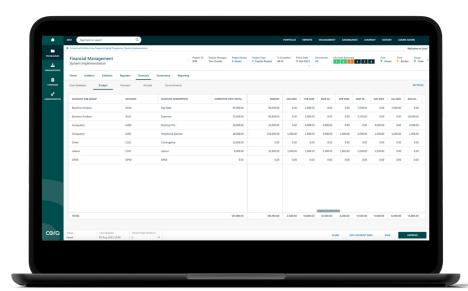
In other words, it was much more important for the PM to focus in on their financials, rather than on their schedules. Because the important thing for them are project costs. So the most useful thing for them is a tool that lets you track all the changes to costs that occur over the course of a project. Because if you're not on top of any changes to your EACs, then very quickly you lose control of your project.

"Manufacturers face near-continuous disruptions globally that add costs and test abilities to adapt."

Deloitte¹



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If for instance, you're building a new factory to manufacture from, and the cost of the cement that you're going to need goes up by 20% in the middle of the project, you have to be able to factor that increase into your costs, to produce revised estimates. Alternatively, those costs might be 10% less than originally forecast. That too has to be inputted so adjustments can be made.

And that needs to be done on a continual basis, as there is a constant stream of changes that all projects have to factor in as they progress.

This is what differentiates Cora from so many of the other products on the market. Other systems have extraordinarily limited scope around the tracking of costs. Which is strange, because costs are central to all businesses, especially to those in manufacturing.

It's Cora's ability to enable you to track costs in such a detailed and continuous way that makes it such a powerful tool. It gives invaluable insights into your financials, and means you can carefully track a project's costs as it progresses through each stage of its lifecycle. And that kind of visibility into your project lifecycle is invaluable.

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3. Benefit two: daily logs

The manufacturing process involves a myriad of moving parts, sets of machines and groups of people. So you need to have people on the factory floor, or on site, tracking the daily interactions that take place. Because every day, thousands of change orders get generated.

But because of the large amount of registers that many companies have detailing their workflows, many of them continue to operate using mountains of spreadsheets. That's because most software products aren't designed to flexibly handle change orders, or because the PM doesn't trust the one they have to do so reliably.

So when something goes wrong, and something will always go wrong when you're working on a large, sprawling project, and you and the various contractors and sub-contractors end up in court, you're going to be asked for your daily logs.

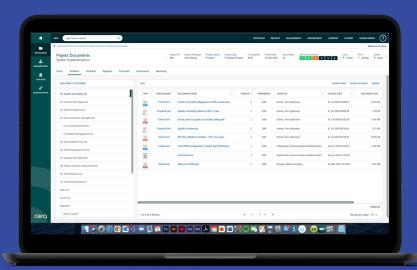
Because you need to be able to demonstrate that the reason you failed to meet your deadline and deliver X task on such and such a date, was because contractor Y had failed to complete task Z by their deadline. So it wasn't physically possible for you to do what you'd been contracted to.



"53% of surveyed organizations plan to enhance data integration for supply-and-demand visibility and planning."

Deloitte¹

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And you then need to be able to produce documents and images to back up your claims, detailing all and any exchanges between you and contractor Y, and anyone else involved. Because what your dispute will come down to is the number of documents you can produce, and the story they tell about what actually happened.

The beauty with Cora is that it looks after all that for you, in a way that makes finding everything effortless, and in a system that is logically structured and incredibly easy to use.

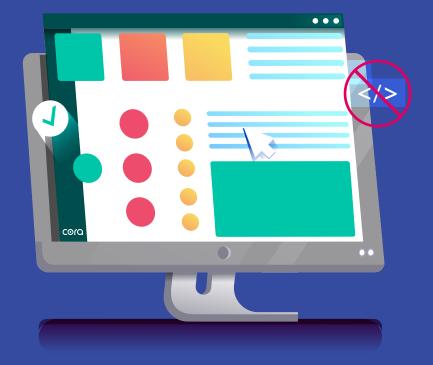
Every document is time-stamped, and user-stamped, and it's very easy to attach and upload images and any other evidence to the records you generate. Which is especially important when it comes to capturing activities that are outside of the schedule. Because all of those have to be accounted for just as carefully as everything else.

All you have to do is log into your dashboard, find what you're looking for, and hit 'export'. And because Cora is so easy to configure, it's very simple for us to re-configure it to suit whatever your specific needs are. Whether that's around your structural systems, or the particular nature of the projects you oversee.

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Not only that, but because Cora has been designed as a low/no code platform, you'll find that many of the users within your organization will quickly start configuring it for themselves. Which is turn will make them into Cora advocates, which will hugely help with the overall buy-in throughout the organization.

An accurate, reliable daily log that's kept permanently up to date, and is easy to access and produce, is vital when it comes to avoiding unnecessary fines and penalties. It will save you a huge amount of time, and, therefore, money.



4. Benefit three: strategic workforce planning

Manufacturing goes through periods of high and low demand. Some of which is predictable, like Christmas and Easter. But a lot of which comes out of the blue. Like the sudden shortage of microchips after the pandemic, which created all sorts of bottlenecks throughout the manufacturing sector. And the oversupply of chips that then resulted, after the correction that followed.

In response to which, a project manager will end up putting in a request for someone with a specific skill to work on X. But he'll have no idea who's going to get assigned to that task. His request goes into the system, and the system will deal with it. And when you're part of a large organization, you don't have dozens of large projects, you have thousands of them. And each one of those large projects has hundreds of mini projects within them.

So you need to have an accurate and up to date idea of exactly what resources you have, what your current projects need, what you're going to need, and for how long each resource or asset is going to be needed for on each of the different projects.

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Are you going to have to move people around from within your organization, or are you going to have to bring contractors in from outside? If so, for how long, and on how permanent a basis? You have to stay lean and agile so you need to be able to say, we're going to have a problem with X in 4 months' time, if we don't do something about that particular skills shortage now.

What you really need then is to be able to identify the skills you're going to need across all your projects, and when you're going to need them. And to then roll that up across your schedules in a reliable and accurate way.

And that's precisely what Cora's strategic workforce planning functionality has been designed to do for you. We've been developing it for years, and it's been built in response to the issues that our customers have found most challenging, and have asked us to try and address.

All you have to do now is go on to your dashboard, and it's all immediately accessible to you. Configured in whatever way is most convenient for you. The different skill sets, and how they're distributed across your organization. Your current versus your predicted demand. And the tools to manage your resources, allocate those assets and plan for the future, in the most

productive and efficient way possible.

It's all there on your dashboard.

https://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-2022-manufacturing-industry-outlook.pdf

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5. Cora: giving you the power of predictability



Radically reduce costs Significantly increase revenue

Cora empowers enterprise organizations to plan and manage their long-term projects.

What we do

We make sure that everything you do and make is delivered on time and on budget, thanks to our seamless integration of your forecasts, schedules, resources and financial controls, while moulding to your existing processes and integrating other solutions required to give you a single source of truth.

How we do it

By streamlining and centralizing all your data, in real time, giving you immediate and effortless visibility into every project and across your portfolio.

What that means

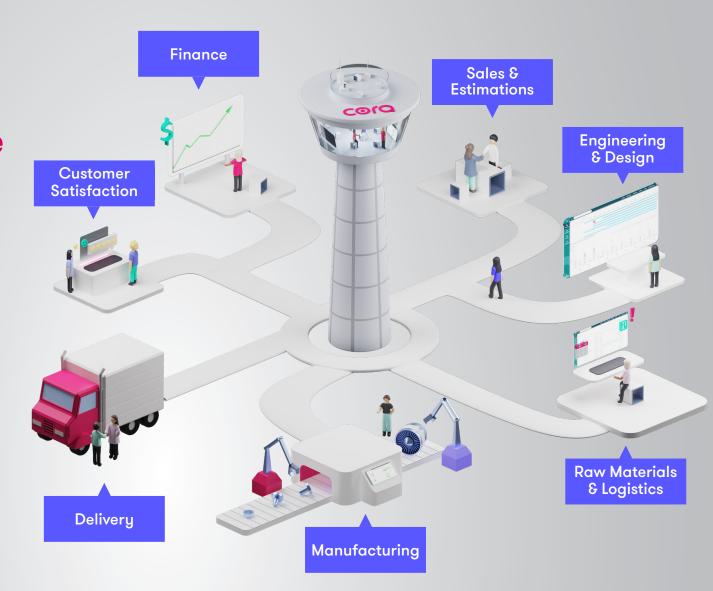
Those gaps between planned and actual costs and delivery are significantly reduced, so your costs and waste go down and your margins and revenue soar.

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We make you the 'control tower'

Where all your data and documents are collected and organized. Everything is constantly updated and immediately accessible.

So you get to effortlessly orchestrate each and every one of your projects.





Prioritize the right projects

Consistently recognized by Gartner[™] in its Magic Quadrant for Strategic Portfolio Management, Cora gives you that bird's-eye into your portfolio. So you can visualize and evaluate how they each fit in with your strategic objectives.



Integrate processes

Bring any existing processes into the one, central system, so everyone is working in the same, standardized way, and off the same facts and figures.



Sync your supply chain

Track and monitor all the data that your parts, materials and assets generate as they move through your supply chain.



Centralize your project data

Get immediate and granular visibility into everything, wherever you are. It's all there on your dashboard.



Reduce deviation

Minimize those gaps between planned and actual costs and delivery, so you can be confident of continually maximizing your margins.



No/low code configurability

We've designed all our products so that they can be easily configured to meet your precise needs, both for you and by you. And because Cora is so famously easy to use, you get immediate buy-in across your whole organization.



