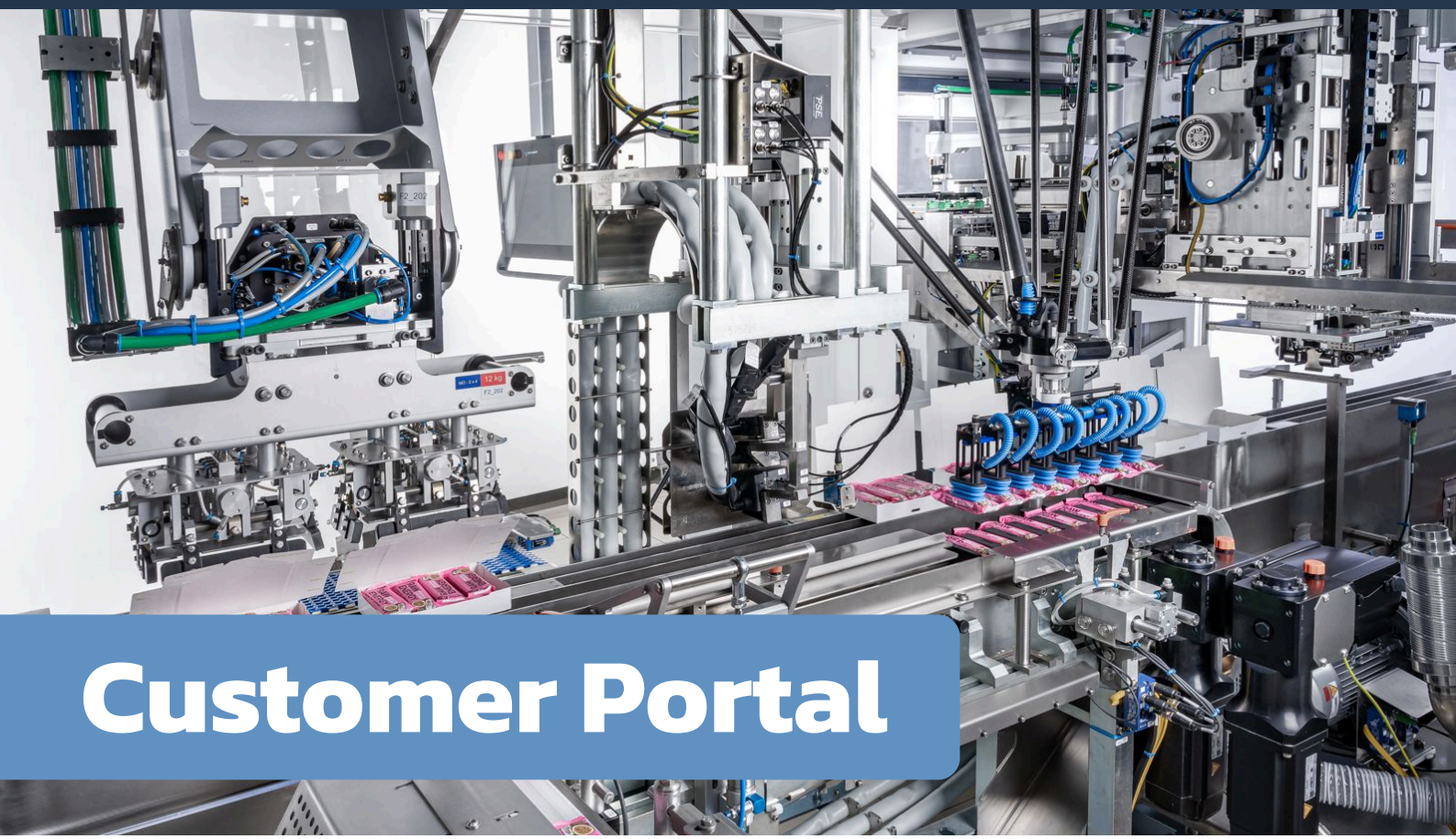
TRANSACTION NETWORK



Customer Portal

FOR THE CEO AND CFO OF A MACHINE BUILDER

How does it pay off?

You give your customers everything that belongs to the machine: CAD data, bill of materials, technical documents, service manuals. None of that sells anything. So your CFO is right to ask how it pays off. Here is the honest answer, in four stages, with numbers you can check.

$33
per machine per year is enough for the information portal to pay for itself.

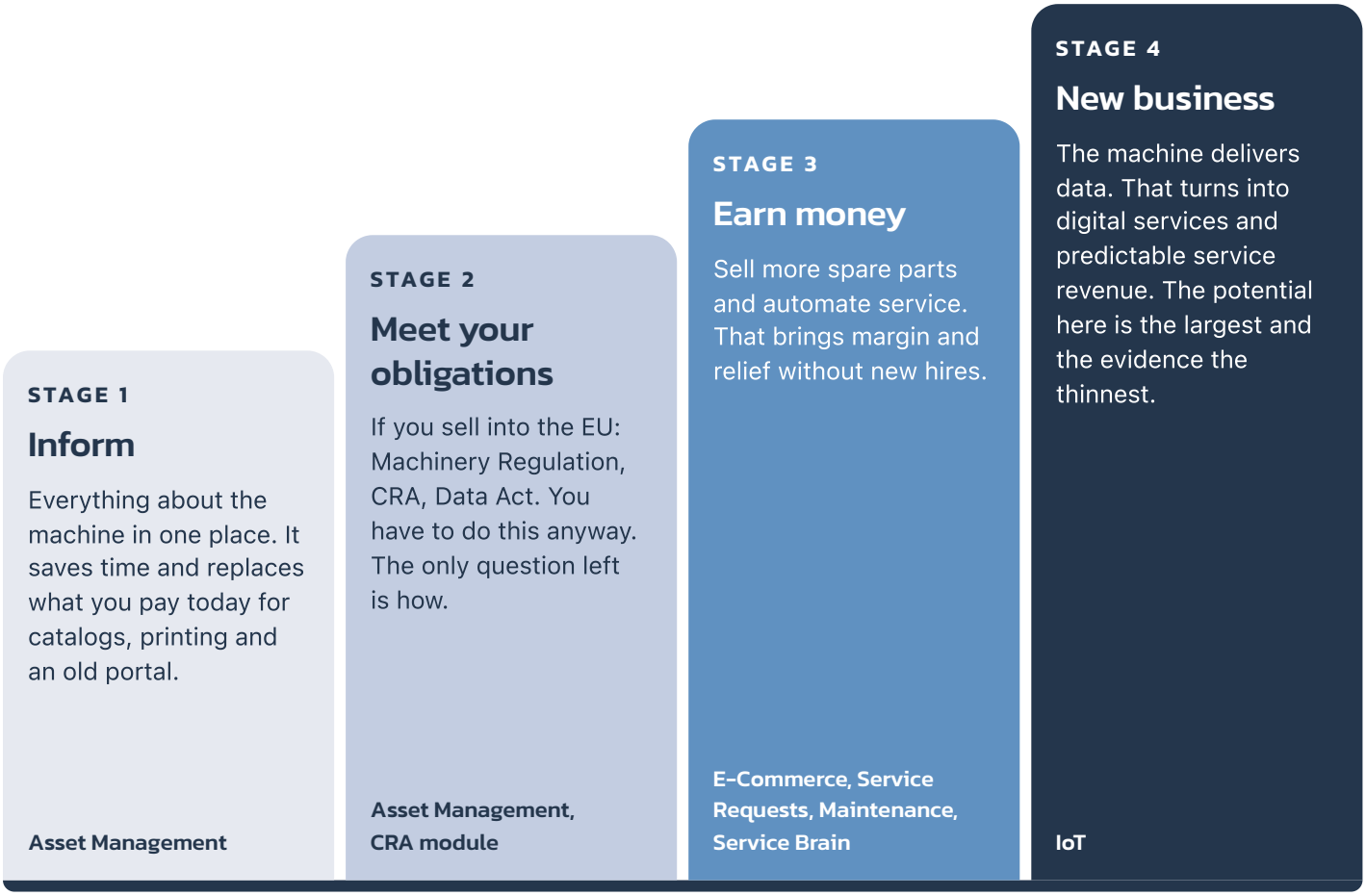
34 months
until the portal with a parts shop pays off at $100M in revenue.

about 10%
of your revenue is spare parts. That is where the money is.

Your ERP, your service team and your customer relationships stay as they are.

THE ANSWER ON ONE PAGE

From information portal to new business: four stages.



THE KEY POINTS

1. **There is no reliable percentage.** We read McKinsey, BCG, Bain, Deloitte, Roland Berger, Gartner and Forrester and found no clean measurement for machine builders. Fraunhofer even finds no added revenue from pure sales platforms.
2. **You can still do the math.** Information has no price, but every call, every service visit and every order does. The question is: How little has to change for the portal to pay for itself in three years?
3. **It depends on your size.** At $100M in revenue, the portal with a parts shop needs 4.6% more parts revenue. At $50M, it needs 9.2%.
4. **If the numbers do not work for you, that is not yet a no.** Start smaller, for example with the machines of the last ten years, and decide deliberately how much you can afford to lose.
5. **The money is in parts and service, not on the hotline.** Opening one more ordering channel only moves orders around.
6. **In the end, your number counts.** We record where you stand today, unlock customers step by step, and recalculate with you after twelve months.

STAGE 1

Inform

Information is infrastructure. A road does not pay off through its asphalt but through the traffic on it. That is why this is so hard to value:

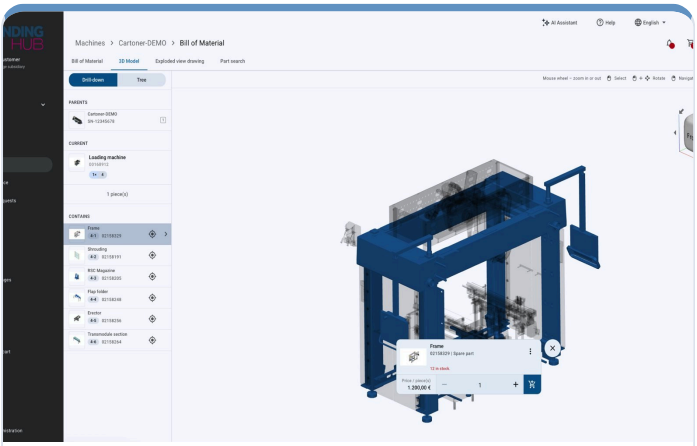
Customers benefit first.
They find what they are looking for faster. All you see is that something no longer happens.

What does not happen appears on no invoice.
The call that never comes, the wrong order, the service visit: Nobody counts these today.

A clean measurement is missing.
We also found none for how much time technicians at machine builders lose searching. The numbers often quoted come from aviation and mean something else.

The biggest value comes later.
Without structured master data, any automation stays a prototype [39]. We deliberately leave that out here.

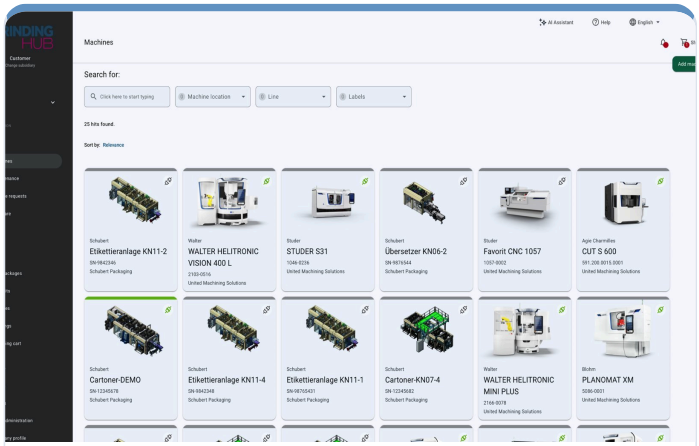
WHAT THIS LOOKS LIKE IN PRACTICE



Gerhard Schubert [37]

Replaced its self-built parts list tool. Customers find documentation, wiring diagrams, manuals and 3D parts lists for all their machines in one place.

The biggest hurdle: its own master data.



UNITED GRINDING Group [38]

Identifying parts and entering orders used to be manual. Today customers see everything themselves and can tell from the 3D model whether they need a technician. The back office is clearly relieved.

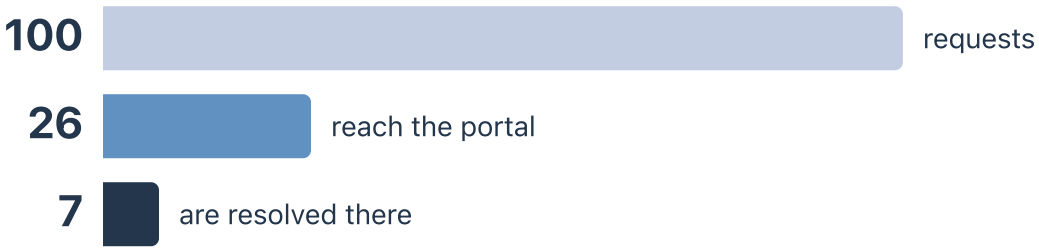
The biggest hurdle: master data.

Both show that it works. Neither says how much. We measure that with you.

STAGE 1: WHAT ACTUALLY ARRIVES

Of 100 requests, about 7 go away.

That sounds small, but it is realistic. In the first years, about one request in four reaches the portal, and about one in four of those is fully resolved there. Depending on the company, it is 3 to 11.



Usage 20 to 30% [3, 8, 9], fully resolved 14 to 36% [10], our own calculation. For simple questions about price and status, the share can be higher.

FIVE MISTAKES YOUR CFO WILL SPOT IMMEDIATELY

A click is not a saved call.
UPS estimated that two thirds of its web users would not have asked at all without the web [7].
We count only what really goes away.

Offered is not used.
At DMG MORI, about one customer in five was registered by the end of 2020 [8]. Fewer than 30% of buyers use their suppliers' digital offers [9].
We calculate with 20 to 30% usage.

Tried is not solved.
Only 14% of issues are fully resolved in self-service, 36% of very simple ones [10].
Hence 3 to 11% relief, not 50.

Online does not mean more revenue.
At KION North America, about 80% of orders ran online and volume barely grew [11].
More revenue needs a reason, such as the right part for the serial number.

A saved hour is not yet a dollar.
It only becomes money if a position goes away or you get more done without hiring [12]. Germany's federal administration separates the two as well [13].
We show money and time separately.

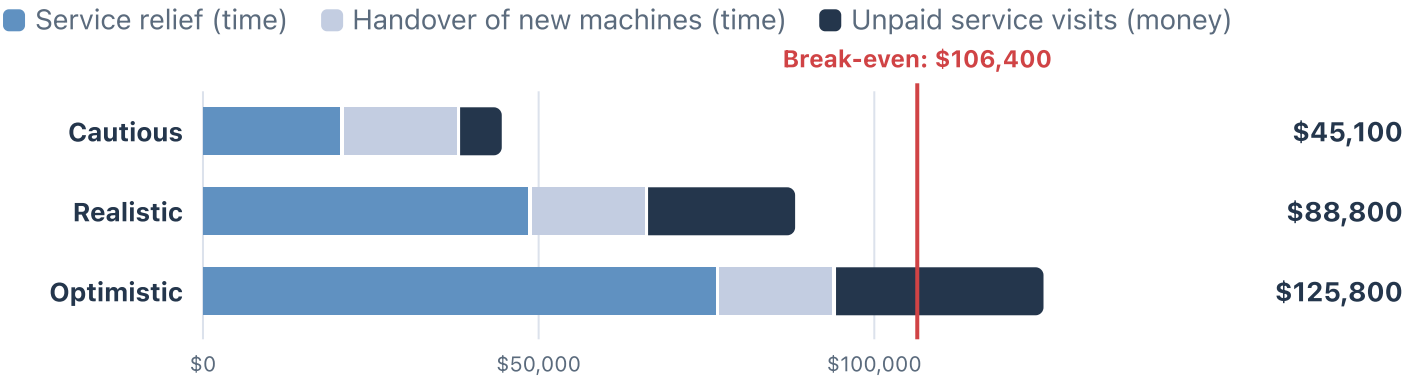
STAGE 1: THE MATH

An information portal earns no money. It only has to pay for itself.

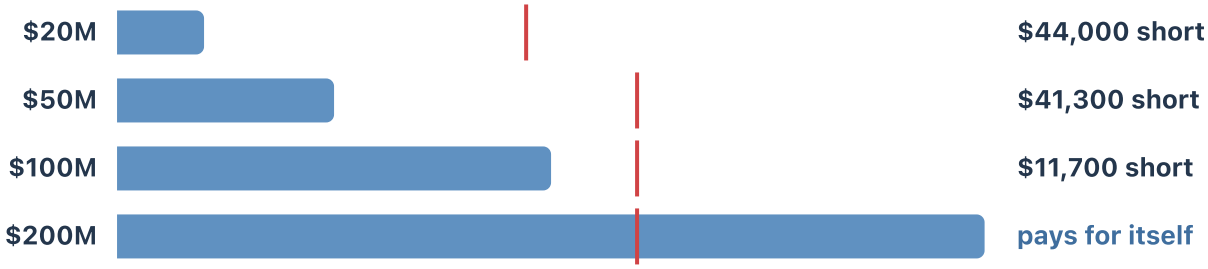
Our example is not an offer but a calculation you can check. This manufacturer pays $65,200 a year for the portal, or $20 per machine. To pay off in three years, it has to bring in $106,400 a year. That is $33 per machine.

$100M revenue | $500,000 machine price | 20 years of use | 3,200 machines in the field

What the portal brings this manufacturer per year



Realistic benefit against the break-even (red line), by revenue



Assumptions: Customer service costs 0.7% of revenue [6], of which 3, 7 or 11% goes away. 1.5 unpaid visits per $1M of revenue at $1,500 each, of which 3, 10 or 14% can be avoided [18]. Each handover takes 8 hours, 25% of which is saved. Visits and handovers are sample values from our calculator.

What this means

From about $100M in revenue, the portal nearly pays for itself, mostly through freed-up time. Below that, it has to replace about $40,000 a year that you spend today on catalog software, printing, shipping or an old portal. Or the next stages carry it.

Watch out: master data

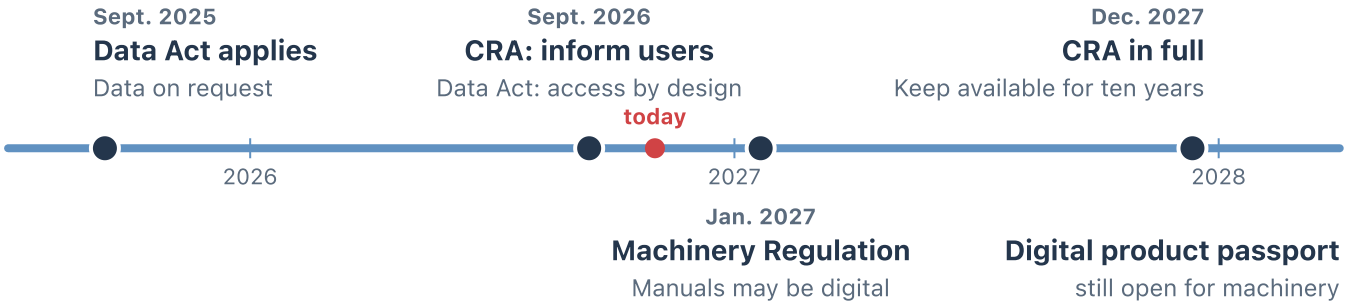
The example budgets only $5,000 for data preparation. At Schubert and United Grinding, that was exactly the biggest effort. Every additional $10,000 raises the break-even by $5,000 a year.

Why we calculate this way: The UK Treasury requires, as a minimum standard, finding the point at which a measure tips and explaining whether it is realistic [14]. Half of German CFOs think in payback periods [15], and internal forecasts are considered reliable for only about two years [16]. So we look three years ahead at most, with a ramp-up of 30, 70 and 100%.

STAGE 2

Meet your obligations

If you sell machines into the EU, part of this information is no longer voluntary. A U.S. headquarters does not change that [43, 44]. It changes the math, because this work comes up even without a portal. Four rules play a part, and each one governs something different.



Machinery Regulation [29]

Operating manuals may be digital. They must then be downloadable and stay online for the life of the machine, at least ten years. Paper only if the customer asks for it at purchase.

You may, you do not have to. Stricter rules apply for non-professional users.

Cyber Resilience Act [19]

You inform affected users about exploited vulnerabilities and the fix, including for products already delivered. From late 2027, you keep user information and updates available for at least ten years.

Applies only to products with digital elements. The reportable case itself is rare.

Data Act [30]

Your customers can demand their machine data and have it passed to third parties, free of charge and machine-readable. Access may run through your portal [31].

It covers machine data, not manuals, parts lists or CAD data.

Digital product passport [32]

There is no legal act for machinery yet, and the work plan through 2030 does not name it. Linking machine and documents cleanly today still lays the groundwork.

An option, not an obligation. It counts as zero in our math.

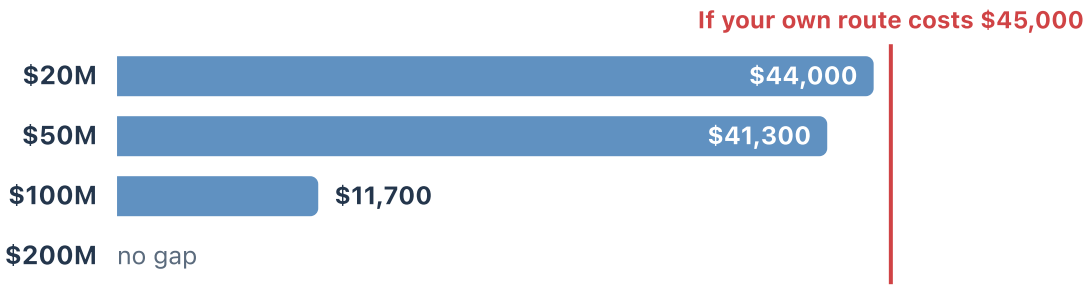
We found no general obligation to hand over CAD data and complete parts lists. You decide that yourself. This is not legal advice.

STAGE 2: WHAT CHANGES

«Is it worth it?» becomes «Which route is cheapest?»

Where an obligation exists, the work comes up anyway. If your own route costs about $45,000 a year, about half a position, the information portal pays for itself at each of these sizes.

What the information portal still lacks per year

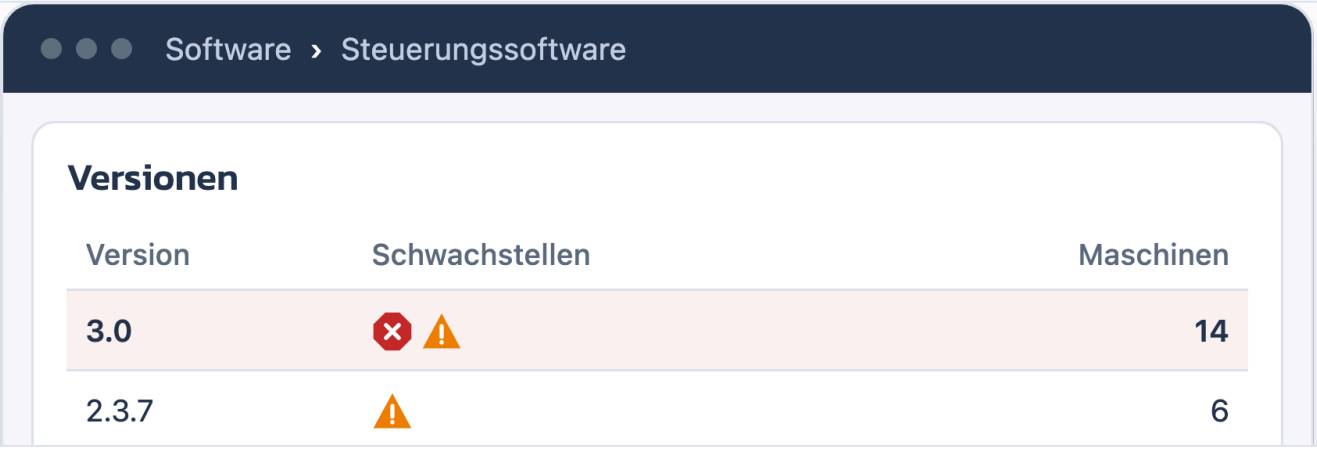


Printing and shipping can go away.
From January 2027, a digital manual is enough for the EU, unless the customer asks for paper at purchase.

The obligation outlasts any project.
At least ten years online means: If you build it yourself, you run it that long too.

You must know who has which machine.
With second owners, some manufacturers do not know that today [24]. That is exactly what the machine record from Stage 1 delivers.

With Transaction-Network
Asset Management brings machine, serial number, customer and documents together. The CRA module adds software versions, updates and notifications, for $4 per machine per month, $49,200 a year in the example. It also lays the groundwork for the product passport. We promise no more than that.



STAGE 3

Earn money

This is where money comes in, in two ways: You sell more spare parts, and you automate your service. Both sit on the machine record from Stage 1. This much is proven, and this is where it ends:

50% vs. 15 to 25%

Gross margin on spare parts vs. new machines [1].

About 100 large machine builders. This says nothing about portals.

3%, then 10%

That is how much more revenue a reworked portal brought in its first and second year [4].

One anonymous large manufacturer, no method given, existing portal.

$18M a day

That is what Caterpillar sells online, up from about $10M two years earlier. About $4.5B in 2024 [2].

Global group. The source does not say whether this revenue is additional.

about 5% a year

That is how fast Fecon grew in parts, 27% over five years. Its online share rose from under 10 to 63% [5].

Vendor figures, not adjusted for prices.

26%

That is how much aftermarket revenue runs digitally, according to manufacturers themselves [3].

Just under 100 manufacturers, read via trade press.

$1.84 vs. $13.50

Self-service vs. live contact, per contact [6]. The old $0.10 vs. $8.01 is outdated.

Medians across industries, not per solved case.

0.7%

That is the median share of revenue companies spend on customer service [6]. So there is little to gain on the hotline.

Across industries, not shown for machine builders.

no added revenue

Companies with pure sales platforms show no relevant revenue effect. With service added, it averages 3% more service revenue [23].

German data from 2018, correlation not cause. The strongest objection to any added revenue.



Spare parts: click in the 3D model and order



Service: the Service Brain knows every machine

STAGE 3: SELLING SPARE PARTS

About 10% of your revenue is spare parts.

Service makes up about 18 to 20% of revenue at German machine builders and 22% in Bain's benchmark, 15 to 30% depending on the company [25, 26, 27, 28]. About half of that is spare parts [26, 27, 28]. At Gerhard Schubert, service contributes more than 25% [37]. We found no public statistic for mid-sized U.S. machine builders, so the 10% is our model assumption.

Out of every $100 in revenue



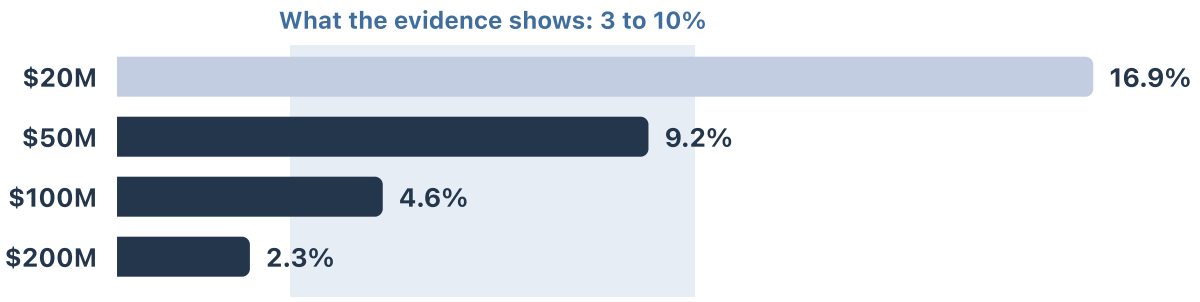
You know your own number: parts revenue divided by machines in the field. In our example, it is about $3,100 per machine per year.

WHAT IT COSTS

EXAMPLE: $100M REVENUE	COST PER YEAR	BREAK-EVEN PER YEAR	PER MACHINE PER YEAR
Information portal	$65,200	$106,400	$33 or 0.6 hours of work
With parts shop	$114,100	$184,000	$58 or 1.1 hours or $144 added revenue
Plus Service Brain	$175,600	$276,300	$86 or 1.6 hours or $216 added revenue

Manufacturer price sheet as of October 21, 2026, in dollars for this paper, net, capped at 1,500 billed machines. Plus one-time onboarding, workshop, data and ERP connection for the shop, 20 of your own working days in the first year and 10 in each further year. Break-even means: in the black after 36 months. One hour costs $53.98 at $95,000 in loaded personnel cost [17, 45], added revenue at a 40% contribution margin. For comparison: An hour in U.S. manufacturing costs $48.62 [17].

How much more parts revenue the portal with shop needs if it has to carry the cost alone



STAGE 3: WHAT THE EVIDENCE SAYS

Calculated realistically, it pays off from about $100M in revenue.

0 · 3 · 10%
more parts revenue: cautious, realistic, optimistic [4, 11, 23].

The optimistic value is a single case.

3 · 7 · 11%
less effort in service.

Our own calculation [3, 8, 9, 10].

3 · 10 · 14%
fewer unpaid service visits [18].

Vendor data, volume and price are sample values.

MONTHS UNTIL THE PORTAL WITH SHOP PAYS OFF

	CAUTIOUS	REALISTIC	OPTIMISTIC
$20M revenue	not within 5 years	not within 5 years	not within 5 years
$50M revenue	not within 5 years	not within 5 years	**24** (29)
$100M revenue	not within 5 years	**34** (not within 5 years)	**8** (13)
$200M revenue	not within 5 years	**14** (20)	**2** (3)

In parentheses: only what works as money, without freed-up time.

How to read this
Without added revenue, the portal does not pay off at any of these sizes. The decision is made on spare parts, not on the hotline. The right column is not an expected value. Below $100M in revenue, you need another reason: costs that go away, an obligation or a smaller start, for example with only the machines of the last ten years.

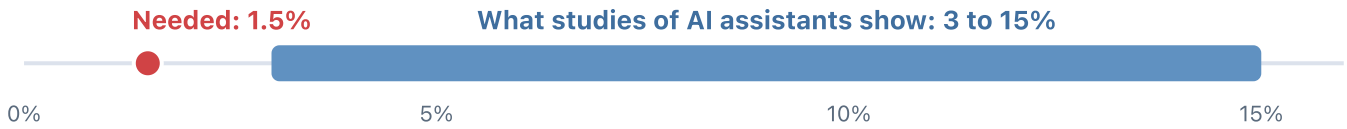
Look here first
What do you pay today for catalog software, printing, shipping and an old portal? Every dollar of that lowers the break-even right away.

STAGE 3: AUTOMATING SERVICE

More than 70% of service time went into preparation and coordination.

That is how one internationally active machine builder described it [33]. It is one voice and not a measurement, but it shows where the lever is. The machine reports a replacement, configuration and history are ready, the part is identified, the partner has the order. That only works once Stage 1 is in place. Without a clear match, AI stays an analysis without effect.

How much of its direct service costs the Service Brain has to save



In the example, the Service Brain has to bring in an additional $92,300 a year. Service without parts is about $10M in revenue, at about 39% gross margin [28] that is about $6M in direct costs. About 1.5% of that is needed. This is our calculation and no promise. The lever here is bigger than in Stage 1, because it acts on technician time and not on the hotline.

15% more cases

per hour resolved by support teams with an AI assistant, 30% for less experienced staff [34].

One company, customer support. Transferring this is an assumption.

about 3%

of working time saved by AI chatbots on average across 25,000 employees in Denmark [35].

Eleven occupations. This is the damper on every AI story.

In practice

At UNITED GRINDING, thanks to the maintenance calendar, technicians usually know which parts are due before they arrive [38]. Gerhard Schubert wants to run tickets, guided maintenance on the 3D model and training through the same portal. Large customers order from their own ERP, and the shop becomes their catalog [37].

This only turns into money if the time gained is planned for: more service revenue, or instead of new hires. U.S. manufacturers may need up to 3.8 million new workers by 2033, and 1.9 million of those jobs could stay unfilled [36]. For industrial machinery mechanics alone, the government expects about 51,900 openings a year [45].

TRANSACTION NETWORK

STAGE 4

New business from machine data

Up to here, the registered machine is enough. Now it starts to report: You see how your machine runs at the customer's site. That turns the machine builder from supplier into operating partner [33]. This is the stage with the greatest potential and the least evidence.

28%

of new machines are remotely connected today [1].

About 100 large machine builders.

4%

of machine builders earn recurring revenue from digital services [1].

The goal is clear. Few have made it so far.

$1.1B

in deals closed by Caterpillar in one year from events reported by machines in the field [2].

Global group with over 1.5 million assets reporting data.

The simplest math

A machine that reports live data costs you $8 a month, or $96 a year. A single avoided service visit at $1,500 therefore carries 15 machines for a full year.

What you can sell

Service packages with fixed response times, paid access, AI as an add-on [39]. That turns into predictable service revenue [33].

Why the data is coming anyway

If you sell into the EU, new machines with data functions must provide data access, and your customer can have the data passed to third parties [30]. If you do nothing with it, you leave the field to others.

The catch

Condition monitoring lowers parts demand [40]. More data does not automatically mean more parts revenue.



We deliberately did not run the numbers for this stage, because the evidence is missing. If you enter here, you do so for strategy, not because of a calculation.

WHAT ELSE COUNTS

Not in the math, but in the decision

Building it yourself

For most companies, a platform of their own will not pay off, said Germany's machinery association VDMA [20]. Across 1,471 IT projects, costs overran by 27% on average, and one in six by an average of 200% [21]. The builder carries that risk alone.

Customer loyalty

At one U.S. bank, the online channel first raised cost per customer, while customers stayed more loyal over three years [22]. For machine builders there is no measurement, and Deloitte warns that loyalty fades when personal contact declines [24]. So we left it out.

The foundation

The machine record is the precondition for everything else: orders, service, knowledge, evidence. We value it at zero. Your CFO may read that as a reserve.

WHO MAKES SURE IT HAPPENS

A benefit without a name does not belong in a business case.

The result comes from inside your company, and it does not happen by itself.

BENEFIT	WHAT HAS TO CHANGE ON YOUR SIDE	WHO OWNS IT	HOW YOU MEASURE IT
Usage	You actively invite customers. From commissioning, access belongs to the machine.	Service and sales	Customers with one transaction in 90 days
Added revenue	Parts match the serial number, prices and availability are right.	Head of aftersales	Parts revenue per machine
Fewer inquiries	Inquiries go to the portal, and the time gained is planned.	Head of inside service	Requests per 100 machines
Fewer visits	Before a trip, someone checks for a remote fix.	Head of service	Unpaid visits per 100 machines



BEFORE YOU DECIDE

Five questions your CFO will still ask.

1 Why Transaction-Network?

Because we have built such portals. Gerd Bart and his team at the SAP consultancy Sybit developed customer portals for machine builders such as myBühler, MyMULTIVAC and KHS Connect [41]. We know your ERP and where manufacturer portals end.

Gerhard Schubert · UNITED GRINDING

Industrie 4.0 Award Baden-Württemberg 2023

CECIMO MTI Award 2025 with UNITED GRINDING



2 What is the most we can lose?

$82,300
information portal

$139,700
with parts shop

The first year, if it brings nothing at all. Those are the amounts in the $100M example, including setup and 20 of your own working days. The contract runs twelve months and ends with three months' notice [42]. Only more demanding master data would add to it.

3 What is the alternative?

YOUR ROUTE	FOR IT	AGAINST IT
Do nothing	No project, no new invoice.	Stage 2 stays if you sell into the EU. See question 5.
Build it yourself	Everything exactly as you want it.	Build, operation and updates over the life of the machine. You carry the cost risk alone [20, 21].
Portal on the ERP	Close to orders and prices.	The ERP knows orders. You still have to build the record for each machine.
Transaction-Network	Built for machine builders, monthly price, annual exit.	You tie yourself to one vendor. See question 4.

4 What if you or we stop?

Then you take your data with you. It belongs to you, even after the contract ends [42]. The master data you build stays your asset, no matter who displays it in the future.

Data handed over at any time · No right of retention · Up to 12 months of paid transition help

Data only in the EU and EEA · No AI training on your trade secrets

THE FIFTH QUESTION

And if we do nothing?

So far we have compared the portal with a today that stays as it is. That is the most comfortable assumption in this paper. As far as we could find, nobody has cleanly measured what manufacturers lose by doing nothing. You can still do the math, with the same threshold as on page 9.

5 How much can you lose before doing nothing costs more?

YOUR REVENUE	THE PORTAL WITH SHOP MUST BRING	DOING NOTHING COSTS MORE IF YOU LOSE	THAT IS
$100M	4.6% more parts revenue	about 4.6% of parts revenue	parts for about 150 of 3,200 machines
$50M	9.2%	about 9.2%	parts for about 150 of 1,600 machines
$20M	16.9%	about 16.9%	parts for about 110 of 640 machines

Our own calculation, assumptions as on page 9. The reversal holds only roughly, because a loss runs differently from a portal's ramp-up.

Digitization

Manufacturers report that 26% of their aftermarket revenue runs digitally [3]. At the same time, fewer than 30% of buyers use their suppliers' digital offers [9].

The direction is clear, the pace is not.

Competition for parts

Spare parts often carry 80% or more of aftersales profits, and online traders attack catalog parts [40]. Your customer can also have machine data passed to third parties [30].

If you do nothing with it, you leave the field to others.

AI and automation

Without structured master data, any automation stays a prototype [39]. At Gerhard Schubert and UNITED GRINDING, master data was the biggest hurdle [37, 38].

If you wait, you start later at the same point.

Our assessment

Nobody is likely to disappear from the market within a few years because of this. It is more likely that parts and service business drifts away quietly, machine by machine. There is no measurement for that, so we count it in no calculation in this paper. You can check it yourself: How many of your machines bought no spare parts from you last year?

TO CHECK FOR YOURSELF

Our sources

[1] BCG, Aftermarket Services Drive Growth for Industrial Manufacturers, 2025-02-18. https://www.bcg.com/publications/2025/aftermarket-services-drive-growth-for-industrial-manufacturers

[2] Caterpillar, Investor Day, transcript, 2025-11-04. https://s25.q4cdn.com/358376879/files/doc_events/2025/11-4-25-Investor-Day-Transcript.pdf

[3] Valtech and Copperberg, The Voice of Digital Leaders in Manufacturing 2024, via Digital Commerce 360, 2024-02-21. https://www.digitalcommerce360.com/2024/02/21/most-manufacturers-are-investing-more-in-customer-portals-report-says/

[4] McKinsey, Five digital and analytics battlegrounds for B2B aftermarket growth, 2022-02-17. https://www.mckinsey.com/capabilities/operations/our-insights/five-digital-and-analytics-battlegrounds-for-b2b-aftermarket-growth

[5] Documoto, case study Fecon, via casestudies.com. https://www.casestudies.com/company/documoto/case-study/fecon-cuts-down-competition-with-online-portal-for-sales-and-customer-support

[6] Gartner, Benchmarks to Assess Your Customer Service Costs, 2024-02-01, summary. https://www.gartner.com/en/documents/5164231

[7] Brynjolfsson and Hitt, Beyond Computation, Journal of Economic Perspectives 14 (4), 2000. https://ic.unicamp.br/~wainer/cursos/impactos2002/JEP_20Beyond_20Computation_208-13.pdf

[8] DMG MORI AG, Annual Report 2020 and 2021 AGM speech. https://en.dmgmori-ag.com/resource/blob/543318/793b7e594a4177434fa490aa5d782c2f/dmgmorij20e-data.pdf

[9] McKinsey, How aftermarket service providers can meet new customer expectations, 2025-09-12, n = 250. https://www.mckinsey.com/capabilities/operations/our-insights/how-aftermarket-service-providers-can-meet-new-customer-expectations

[10] Gartner, press release, 2024-08-19, n = 5,728, across industries. https://www.gartner.com/en/newsroom/press-releases/2024-08-19-gartner-survey-finds-only-14-percent-of-customer-service-issues-are-fully-resolved-in-self-service

[11] KION North America case, vendor figures, 2023-03-20. https://b2bea-website.pages.dev/blog/a-forklift-maker-moves-ecommerce-forward

[12] Consortium for Service Innovation, KCS v6 Practices Guide. https://library.serviceinnovation.org/KCS/KCS_v6/KCS_v6_Practices_Guide/030/040/040/035

[13] German Federal Government Commissioner for IT, WiBe 5.0, 2014. https://www.finanzen.bremen.de/sixcms/media.php/13/Fachkonzept_WiBe50.24236.pdf

[14] HM Treasury, The Green Book, paragraphs 6.102 to 6.104. https://assets.publishing.service.gov.uk/media/6645c709bd01f5ed32793cbc/Green_Book_2022__updated_links_.pdf

[15] Brounen, de Jong, Koedijk, Corporate Finance in Europe, 2004. https://repub.eur.nl/pub/1111/ERS%202004%20002%20F&A.pdf

[16] Graham, Corporate Finance and Reality, Journal of Finance 77 (4), 2022. https://nber.org/papers/w29841

[17] U.S. Bureau of Labor Statistics, Employer Costs for Employee Compensation, Table 4, June 2026, released 2026-09-09. https://www.bls.gov/news.release/ecec.t04.htm

[18] Aquant, 2025 Field Service Benchmark Report, via Industrial Machinery Digest, just under 160 service organizations. https://industrialmachinerydigest.com/robotics/training/aquants-2025-field-service-benchmark-report-reveals-ai-enabling-39-faster-machinery-repairs-and-more/

[19] Regulation (EU) 2024/2847, Art. 13 para. 9 and 18, Art. 14 para. 8, Art. 69 para. 3, Art. 71 para. 2. https://eur-lex.europa.eu/eli/reg/2024/2847/oj

[20] McKinsey and VDMA, press release, 2020-09-18. https://www.mckinsey.com/de/news/presse/2020-09-18-maschinenbau

[21] Flyvbjerg and Budzier, Why Your IT Project May Be Riskier Than You Think, Harvard Business Review, 2011. https://arxiv.org/abs/1304.0265

[22] Campbell and Frei, Management Science 56 (1), 2010. https://ideas.repec.org/a/inm/ormnsc/v56y2010i1p4-24.html

[23] Lerch and Jäger, Digitale Plattformen auf dem Vormarsch?, Fraunhofer ISI, August 2020, pp. 7 and 8, 2018 survey.

[24] Monitor Deloitte, Wachstumsmotor Maschinenbau (German), p. 33.

[25] VDMA, Service und Kundendienst, based on VDMA service benchmarks. https://www.vdma.eu/de/service-kundendienst

[26] VDMA Academy, seminar pages. https://www.vdma-academy.eu/seminar/service-sales-excellence/

[27] Fraunhofer CML and VDMA, Erfolgsfaktor After Sales Service: 18% per service key figures 2014; 56% at maritime suppliers, N = 51.

[28] Bain, Service Benchmarking, 2015, n = 45. https://media.bain.com/Images/BAIN_BRIEF_Winning_in_industrial_service_US.pdf

[29] Regulation (EU) 2023/1230, Art. 10 para. 7 and Annex III no. 1.7.4.2. https://eur-lex.europa.eu/eli/reg/2023/1230/oj

[30] Regulation (EU) 2023/2854, Art. 3 to 5. https://eur-lex.europa.eu/eli/reg/2023/2854/oj

[31] European Commission, Data Act FAQ, non-binding. https://digital-strategy.ec.europa.eu/en/policies/data-act

[32] Regulation (EU) 2024/1781 and working plan 2025 to 2030, via Eurofins. https://sustainabilityservices.eurofins.com/news/espr-and-energy-labelling-working-plan/

[33] Gerd Bart, Der nächste Wettbewerb entscheidet sich im Service, white paper, Transaction-Network (German).

[34] Brynjolfsson, Li, Raymond, Generative AI at Work, Quarterly Journal of Economics 140 (2), 2025, pp. 889 to 942.

[35] Humlum, Vestergaard, Large Language Models, Small Labor Market Effects, Working Paper, 2025.

[36] Deloitte and The Manufacturing Institute, 2024-04. https://themanufacturinginstitute.org/manufacturers-need-as-many-as-3-8-million-new-employees-by-2033/

[37] Gerhard Schubert GmbH, customer article: Der Kundenerwartung im After Sales gerecht werden, Transaction-Network.

[38] UNITED GRINDING Group, case study: Zukunftssichere Kundenplattform digitalisiert After-Sales-Service, Transaction-Network.

[39] Transaction-Network, Stillstand ist teurer als Wandel, white paper (German).

[40] Oliver Wyman, The Digital Threat to After-Sales Profits, 2017. https://www.oliverwyman.de/content/dam/oliver-wyman/v2/publications/2017/oct/The_Digital_Threat_to_After-Sales_Profits.pdf

[41] Transaction-Network, About us and press. https://www.transaction-network.com/en/about/

[42] Transaction-Network, Terms, data processing and AI terms, sections 6, 7, 9. https://www.transaction-network.com/en/terms/

[43] Faegre Drinker, September 2026 EU compliance deadlines for connected product manufacturers, 2026-09-10. https://www.faegredrinker.com/en/insights/publications/2026/9/september-2026-eu-compliance-deadlines-for-connected-product-manufacturers

[44] Fisher Phillips, EU Cyber Resilience Act reporting is now live, 2026-09-25. https://www.fisherphillips.com/en/insights/insights/eu-cyber-resilience-act-reporting-is-now-live

[45] U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, Industrial Machinery Mechanics, Machinery Maintenance Workers, and Millwrights. https://www.bls.gov/ooh/installation-maintenance-and-repair/industrial-machinery-mechanics-and-maintenance-workers-and-millwrights.htm

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