



weissr
capex

Boost your company cash flow by 100%

How the Weissr approach can
transform your Capex strategy

GUIDE

A free guide for business leaders interested in a
sounder approach to capital allocation.

Foreword

Ready to tap into your full capex potential?

Most companies leave money on the table due to suboptimal capital allocation. Our proven approach can maximize your long-term company cash flow – and our intuitive software makes implementation incredibly easy.

It's time to leave outdated methods behind.

Traditional thinking and traditional capital budgeting methods treat each investment decision in isolation. Our own approach understands that your company is an interconnected system where each decision impacts the whole.

What we do

Weissr Capex is a platform to capture, understand and strategically manage the full capex picture. Our approach together with our software tool have helped many industrial companies allocate capital more efficiently.

In this guide, we share the thinking and tool behind that success.


We hope you enjoy!

GET IN TOUCH

Mikael Lehtomaa
COO, Weissr



Index

- 4 The Problem
 - 5 Reductionist vs. Systems thinking
 - 6 An example of Systems thinking
 - 7 The 4 steps of the Weissr Capex approach
 - 8 Unlocking hidden value
 - 9 The Systems-thinking based process
 - 10 Creating the base alternative
 - 11 Asset mapping for the base alternative
 - 12 "Small scale" capex
 - 13 Cash flow for the base alternative
 - 16 Create strategic building blocks
 - 19 Combining building blocks into strategic alternatives
 - 21 Making the right choice
 - 22 The big, counterintuitive secret to cash flow
 - 23 Sensitivity analysis and limitations
 - 25 Execution and governance
 - 27 Your capex strategy dictates the rules
 - 28 All of your capex, all in one place
 - 29 Want to learn more?
- 

The problem

Why does traditional capital budgeting fail?

Many companies use approaches such as short payback, high NPV or IRR to make investment decisions.

While these may seem logical, they often prioritize projects that lower the company cash flow even if assumptions are realized. They also ignore the interdependencies and trade-offs between different decision sets, and their long-term impact on the company.

Here's why traditional methods fall short:

- Projects evaluated in isolation miss system benefits
- Short-term metrics override strategic value
- Interdependencies between decisions are ignored
- Cash flow suffers even as individual project targets are met
- Systematic errors lead to consistently suboptimal outcomes

A critical insight - the systematic error risk

Traditional capital budgeting approaches not only underperform. Together with onerous capex management processes, they tend to create systematic errors in capital allocation that institutionalize suboptimal outcomes over time.

Ironically, this can make traditional capital budgeting more harmful than gut decisions. It does not have to be this way!

Want to know more about the implications of this prevailing methodology?

See our condensed guide "The tail wags the dog".



Read now →

Reductionist vs. Systems thinking

Traditional capital budgeting relies on reductionist thinking where one attempts to break complex decisions down to smaller parts. While this does work for well-defined problems, it simply fails in companies where individual capex decisions have a system-wide impact.

Systems thinking changes how you work with capex

Capex decisions must be approached holistically, treating production sites and assets as interconnected and interdependent elements of a larger system:

- A single decision can affect multiple operations
- Assets can be deeply interconnected
- Changes ripple throughout the organization
- Individual metrics can mislead
- Long-term effects require holistic analysis

The critical difference

Reductionist thinking asks, is this individual investment good?

Systems thinking asks:

How does this investment affect our total cash flow over time?



An example of Systems thinking

Let us say a company is contemplating a \$100 million investment to expand capacity at its Berlin plant.

Is this the best use of shareholder capital?

What if the company instead:

- Focused on debottlenecking a production line in Stockholm?
- Consolidated Madrid's capacity by adding two additional lines at another site?

Would that be a more effective use of the \$100 million or not?

And what if we combined this initiative with other strategic scenarios - including mergers and acquisitions, or potential responses to sudden demand decline over the next 5 years?

One intuitively understands the power of being able to weigh these types of decisions against each other. Yet the number of alternatives one could compare are numerous, often amounting to hundreds.

How much cash flow would each of them generate over time, and how should they be weighted against each other?

This is the type of systemic complexity Weissr Capex is built to help you handle.

The 4 steps of the Weissr Capex approach

1

We develop a base alternative that follows certain rules and serves as an analytical starting point.

2

Create a long list of Strategic Building Blocks (SBBs) that represent major capex decisions such as plant closure, debottlenecking, adding new lines etc.

3

We combine these SBBs into sensible strategic alternatives that improve the long-term cash flow of the company.

4

Use the built-in features and safety measures, such as alternative comparison, visualizations, and sensitivity analysis, to ensure a high-quality process to find the alternative that maximizes company cash flow.

When we work with clients, we help them transition from looking at projects in isolation to working with a single view of the whole.

But how does one get a correct and full view?

Even the best capital planning tends to fall apart when it encounters reality. This is why our digital capex platform lets you manage your entire capex process, including strategy, budgeting and management, all in one place.

Read more [↗](#)

Unlocking hidden value

What are the benefits of using Weissr Capex?

Our approach helps you make more strategic investment decisions that strengthen cash flow, while the Weissr Capex platform makes sure you can put that strategy into practice.



Boost cash flow

When you can identify and prioritise the best combination of capex decisions, you can increase your cash flow by 20-100%.



Act holistically

When you are able to see how each decision set impacts the whole, you can be in a truly strategic seat to make optimal decisions across your company from a long-term perspective.



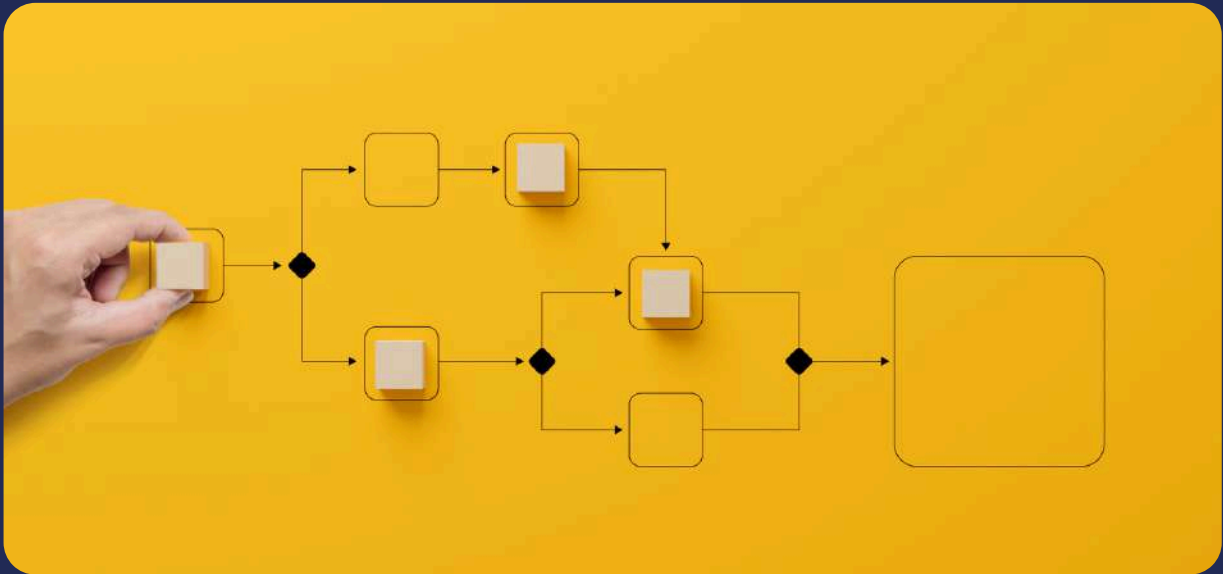
Work efficiently

The speed, quality and alignment of your capex strategy hinges on working with the right people, at the right time, in a shared environment. A unified and simple digital process is critical.



Plan for the longer term

When you can take the whole company into account - and into the same process - you can think and plan for the longer term. Each plant is assigned a strategic role, along with a capex master plan to guide future investments.



The Systems-thinking based process

To be able to work with a systems thinking approach, we must work off of a capex strategy model that takes the whole of our business into account.

Let's look at how to create this model in 6 detailed steps:

- 1 Asset mapping for the base alternative (BA)
- 2 Cash flow for the base alternative
- 3 Strategic building blocks (SBBs)
- 4 Strategic alternatives (SA)
- 5 Sensitivity analysis
- 6 Approving and communicating the strategy

Weissr Capex facilitates this entire process.

Now let's dive in!

Creating the base alternative

The base alternative may not be a realistic strategy, since it's based strictly on the going-concern or "as is" principle assuming your business will continue to operate as it does today. It rather serves as an analytical starting point for the work to come.

The base alternative needs to follow certain rules:

- It is an "as is" alternative. There is no strategic intent.
- Assume that each plant mill produces the current product mix, for current customers (but consider market demand changes in future).
- Your current capacities must remain unchanged, no matter where markets are heading.
- Identify future (5-30 years, depending on industry) capex needs. Consider not just wear, tear and future standards, but also creep in customer expectations regarding quality.

The base alternative does not develop itself compared to the competition, so there will be a slight EBITDA margin decline due to the rules and future assumptions.

Asset mapping for the base alternative

The purpose of asset mapping is to identify the major assets for the company's production sites, including equipment, machinery, buildings and other assets valued above a specified threshold. This threshold typically varies by industry, and can vary between \$50,000 to \$1 million.

The required data for the assets are:

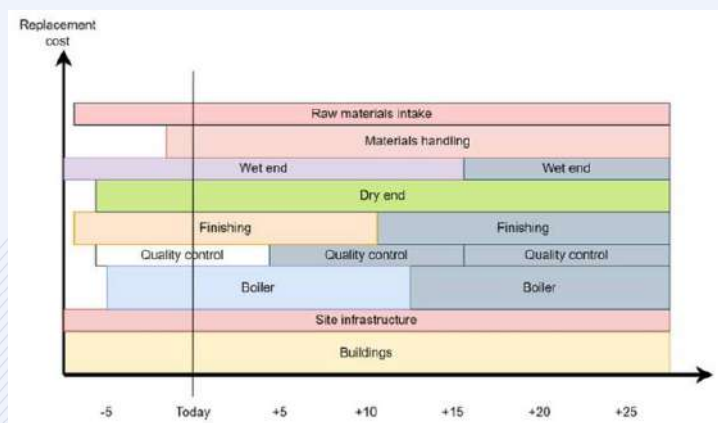
- Operational age
- Turnkey cost to replace or refurbish it today
- Current useful life
- General standard useful life

Mapping these data points will help you generate an investment plan with capex needs for the base alternative over 5–30 years.

The asset map can look something like this.

Here we have used a typical paper company. In this simplified case, the facility consists of nine assets, all of which are over the replacement cost threshold. Some were built or acquired several years before the analysis, since the facility has been in operation for decades.

Half of the assets including buildings and site infrastructure will not be replaced within the nearest 20 years.



“Small scale” capex

The asset mapping for the base alternative will identify the presumed capex needs over the period of the economic model.

The base alternative must also consider additional investments – capex for environmental regulations and safety standards, as well as inevitable “small scale” projects and expenditures that will crop up over the years.

Use site replacement cost as a calculation base

To account for the small scale capexes, and to cover unexpected investments, we have found that calculating a percentage of the total replacement cost for the site each year suffices. The exact percentage will vary between industries, but 0,3%-0,5% is a common range.

Understanding the strategic asset ledger

The result of the asset mapping exercise is what we call a strategic asset ledger, categorized by site, which includes:

- All known and necessary capexes required to continue operations and serve customers over the long term
- Structure and infrastructure capexes including specific, known needs, as well as a percentage of the total cost of replacing all the site’s production assets
- Small-scale production capexes, calculated as a percentage of the site’s total replacement cost

Cash flow for the base alternative

Next, generate a cash flow model to understand the cash flow for the base alternative.

The structure and details of the cash flow model differ between industries, but some of the general items include:

- Production volume and pricing.
- Variable costs, such as transportation, energy, packaging or raw materials.
- Headcount and other fixed costs such as maintenance, overhead and sales, general & administrative (SG&A).

Once the cash flow model is created, the task is to populate it with data to analyze the cash flows. The first task involves adding historical data to understand the past. However, the more critical aspect of the analysis focuses on future projections.

Therefore, the team's objective is to formulate their best assumptions about volumes, prices, and costs for the upcoming years. Following this, the model will apply escalations to project how cash flows will evolve over the coming decades.

The cash flow model will also incorporate the capex needs identified in the Asset Mapping exercise. It is important to note that we are solely interested in cash flows, not accounting data.

Now let's see what a simple cash flow model can look like.

A simple cash flow model example

The base year here represents the historical 3–5 years.

Not all future years are presented.

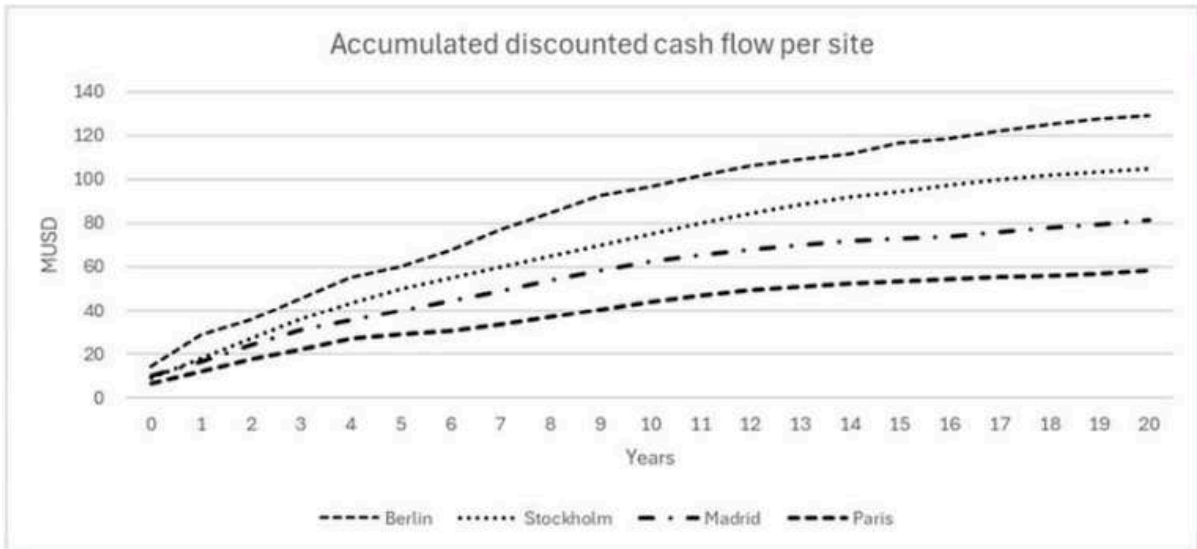
Site: Berlin	Base year	Year 1	Year 2	Year 5	Year 10	Year 20
Capacity	200,0	200,0	200,0	200,0	200,0	200,0
Production	195,0	197,0	198,9	200,0	200,0	200,0
Price / unit	0,54	0,55	0,55	0,57	0,60	0,66
Variable direct costs/unit	-0,20	-0,20	-0,21	-0,22	-0,23	-0,27
Freight cost / unit	-0,10	-0,10	-0,10	-0,11	-0,12	-0,13
Sales	105,30	107,40	109,60	113,50	119,30	131,80
Variable Direct Cost	-39,00	-40,00	-41,00	-43,10	-46,40	-53,90
Freight Cost	-19,30	-19,80	-20,30	-21,40	-23,00	-26,70
Fixed Costs	-20,00	-20,50	-21,00	-22,60	-25,60	-32,80
EBITDA	27,00	27,10	27,30	26,40	24,30	18,40
EBITDA Margin	26%	25%	25%	23%	20%	14%
Change in Working Capital		-1	-1	-1,1	-1,1	-1,2
Tax		-5,4	-5,5	-5,3	-4,9	-3,7
Capex		-5	-3	-11	-4	-4
Cash Flow		15,7	17,8	9,1	14,3	9,5
CO ₂ emissions	117	118	120	121	123	127

Because there are no strategic capexes in the base alternative (BA), Berlin's capacity will remain the same. Demand is predicted to rise, and by year 5, Berlin should be running at peak capacity. Although the price per unit will increase, its costs will rise too, even outpacing the price increases.

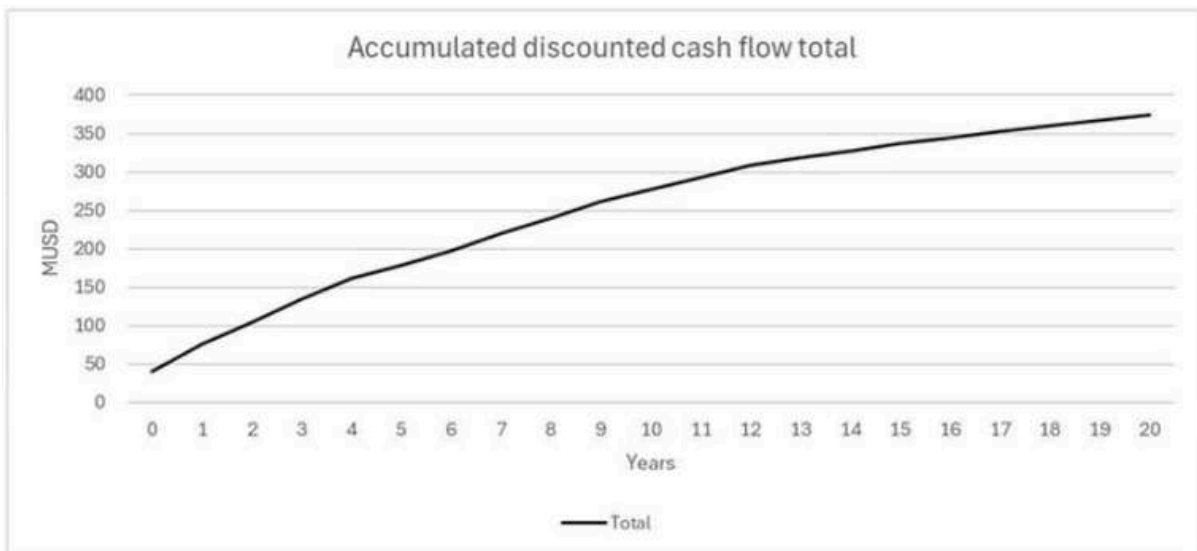
As such, Berlin's EBITDA margin will continually decline over the next 20 years. This is due to competition and technological improvements that drive creative destruction.

Capex data is inherited from the asset mapping exercise described in the previous section.

Once the cash flow for all sites has been projected, the cash flow model returns the site specific accumulated discounted cash flows in the figure below:



Adding all four sites together results in a cash flow curve for the entire company which represents the Base alternative as shown in the picture below. This will serve as the main reference curve for the strategic alternatives to be developed.



Create strategic building blocks

With a base alternative established, we can now ask:

What are the larger, strategic opportunities for each site?

We cannot judge whether these projects are “good” or “bad” in isolation; they must be evaluated in a larger context.

Some will have a short payback, a high NPV or IRR. But this is precisely what we should *not* base our conclusions on given that each project will live in a system of interdependent assets.

By running these individual capex projects through our strategy model, we can evaluate how various project combinations impact long-term system cash flow.

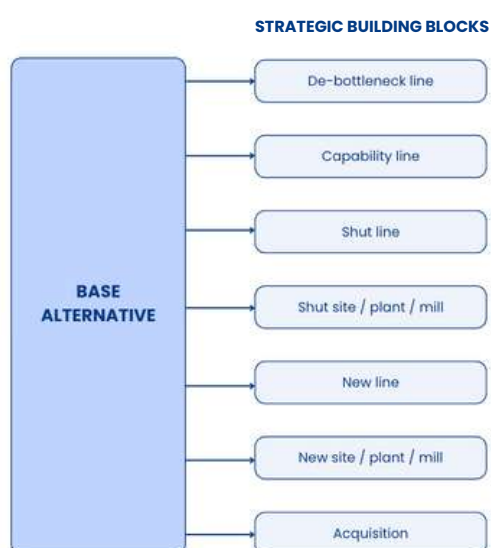
Strategic capex

What do we mean by strategic capexes? These all change something vital in the company, something that can move the needle. They can include:

- Expansion of existing asset capacities
- Addition of capabilities
- Conversion of sites
- Major rebuilds of existing assets
- Line closures at a site
- Complete site closures
- Brownfields or Greenfields
- Acquisitions

Each production site should have 5-10 such opportunities, what we refer to as strategic building blocks or SBBs. An SBB is only for one site. There is never a SBB covering two sites, that would require two separate SBBs.

With these building blocks, you can build business stories.



The SBBs only carry the deviations compared to the base alternative for the specific projects. This means that changes in the base alternative will not require any modifications of the SBBs. They will be applied automatically.

For most SBBs, there is the required capex investment – the turnkey cost of the project. The complexity comes into play when you consider how one change ripples throughout the production ecosystem.

How the decision can affect new costs and result in savings

The data points to address for each SBB will depend on the industry & the structure of the cash flow model. Some examples:

- Capex required to handle higher volumes
- Capital expenditures avoided
- Marginal increase of raw material costs
- Energy consumption changes
- Cost of storing and shipping extra raw material
- Demand for water, electricity, and other utilities
- Waste by-product and cost of disposal
- Labor costs for running the site at a higher production rate
- Change in SG&A expenses and maintenance costs
- Environmental cleanup
- Severance and redundancy costs
- Leases and contracts broken
- Land and equipment sold

Building SBBs is an iterative process. Typically, you start with the obvious factors that come to mind – and once the results of the simulations start to emerge, additional ones emerge.

A typical initial list of Strategic building blocks can look as below:

Berlin

- Close
- Debottleneck + 15 units
- Convert
- Brownfield

Stockholm

- Close
- Debottleneck + 30 units + quality upgrade
- Debottleneck + 50 units + quality upgrade

Copenhagen

- Close line
- Close site
- Add new line
- Debottleneck + 25 units

Paris

- Close
- Debottleneck + 70 units
- Debottleneck + 100 units

Amsterdam

- Acquire
- Acquire and close

Combining building blocks into Strategic alternatives

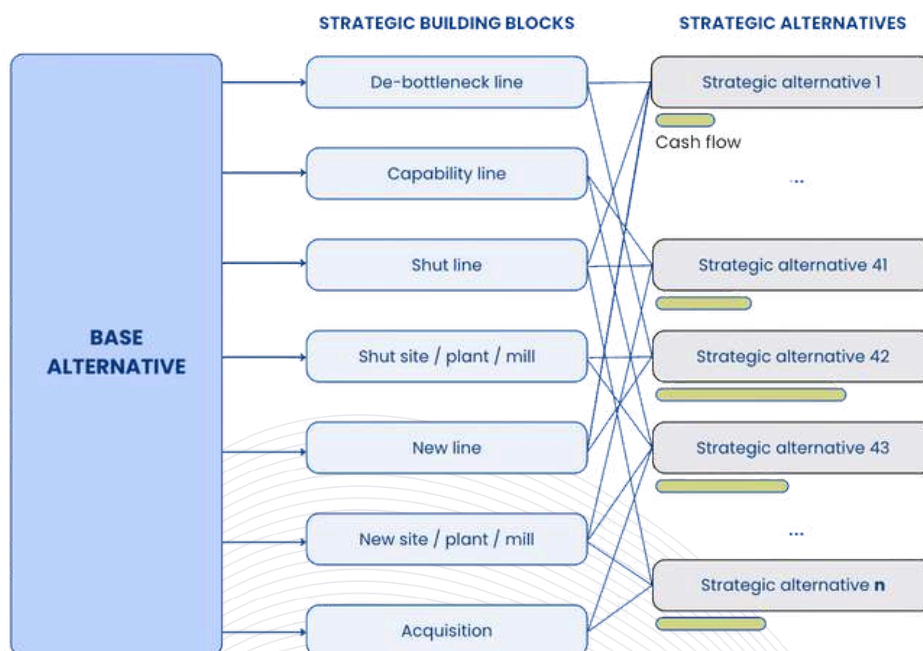
Creating strategic alternatives

The next step is to create combinations of the above Strategic building blocks (SBBs).

Which debottlenecking can be combined with closing a mill, changing capabilities, and adding a line in an existing plant?

How do you deal with a growing market: by large debottlenecking projects, greenfields, or both? How should this be implemented over time?

How do you deal with a declining market: line closures, conversions, plant closures? How are these prioritized over time?



Different timings will generate corresponding SBBs

Debottleneck Berlin 2026, 2028 and 2030 will be represented by three different SBBs (which cannot be combined).

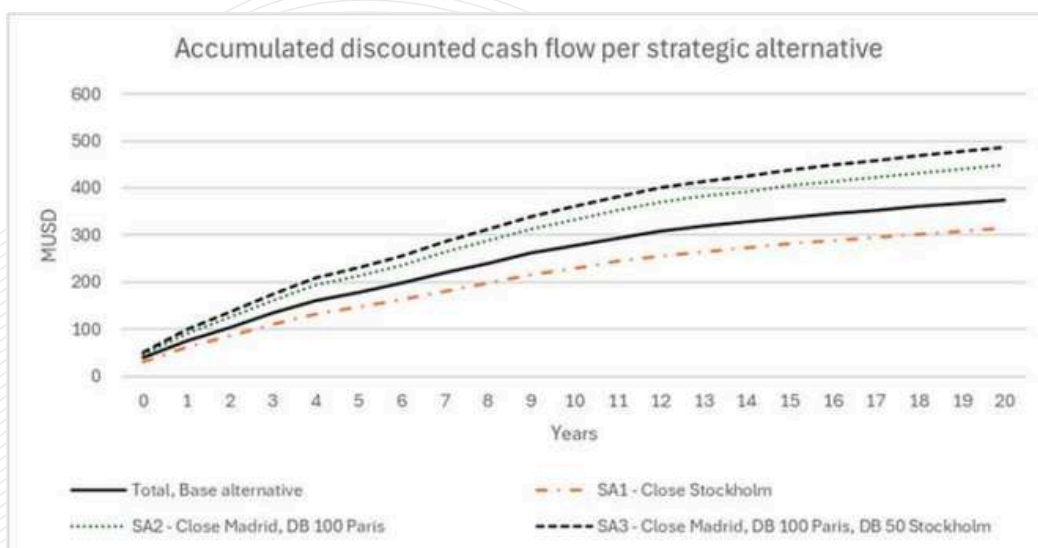
Create strategic alternatives in seconds

Creating a strategic alternative can be quite complex when done manually. With the Weissr Capex platform, it should take you seconds, with all data from all building blocks applied.

Each combination of building blocks may need an import from your linear programming tool, with the same asset settings regarding capacities and capabilities.

The accumulated cash flow from various strategic alternatives can now easily be compared. The output from different strategic alternatives is evaluated (mainly) from an accumulated discounted cash flow perspective.

The highest value alternative is the most valuable strategy.



In this example, alternative SA1 is worse than the base alternative while both SA2 and SA3 perform better over time.

Making the right choice

Find the optimal path, and involve the right people

What will maximize long-term cash flow while making practical sense to the organization? What alternatives meet financial restrictions and customer expectations?

The short answer is, the number of combinations are theoretically infinite. No tool can by itself figure out the realistic alternatives (though it might produce nonsense combinations with great future cash flow).

Finding the optimal path forward needs to be an iterative process involving the right expertise within your company. Our platform will help you identify strategic alternatives that significantly improve or even double long-term cash flow for the whole organisation – but you need to vet it internally.



The big, counterintuitive secret to cash flow

A very strange yet very common discovery

In this phase, you may stumble upon something very interesting: the alternative that maximizes long-term cash flow is likely a combination of SBBs with relatively long paybacks.

This might feel counterintuitive, but is completely in line with what we discuss in our book “Redesigning capex strategy”.

Paybacks, NPV, IRR etc. calculated in the capital budgeting process are simply irrelevant for improving company cash flow.

We have experienced many interesting and non-intuitive situations. For instance, the optimal combination of decisions once involved scenarios where none of the individual building blocks had a payback at all! Find it hard to believe? Read our paper [“The Tail Wags the Dog”](#) for a deeper look.

Dare to disregard paybacks

Individual capex requests in your capital budget will now have longer paybacks – but your company cash flow will improve notably. A boost of 100% is not unheard of with our approach.

It is of course your choice to disregard this approach, and the strategic conclusions from the process described here. But we urge you to understand that doing so is likely to keep your company cash flow far lower than it could be.

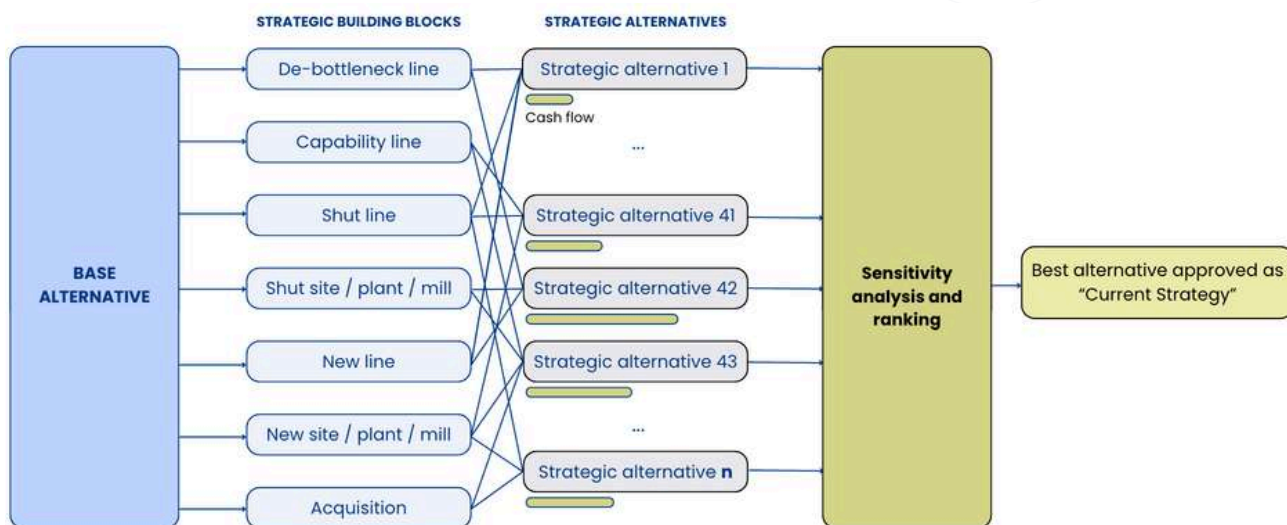
Sensitivity analysis and limitations

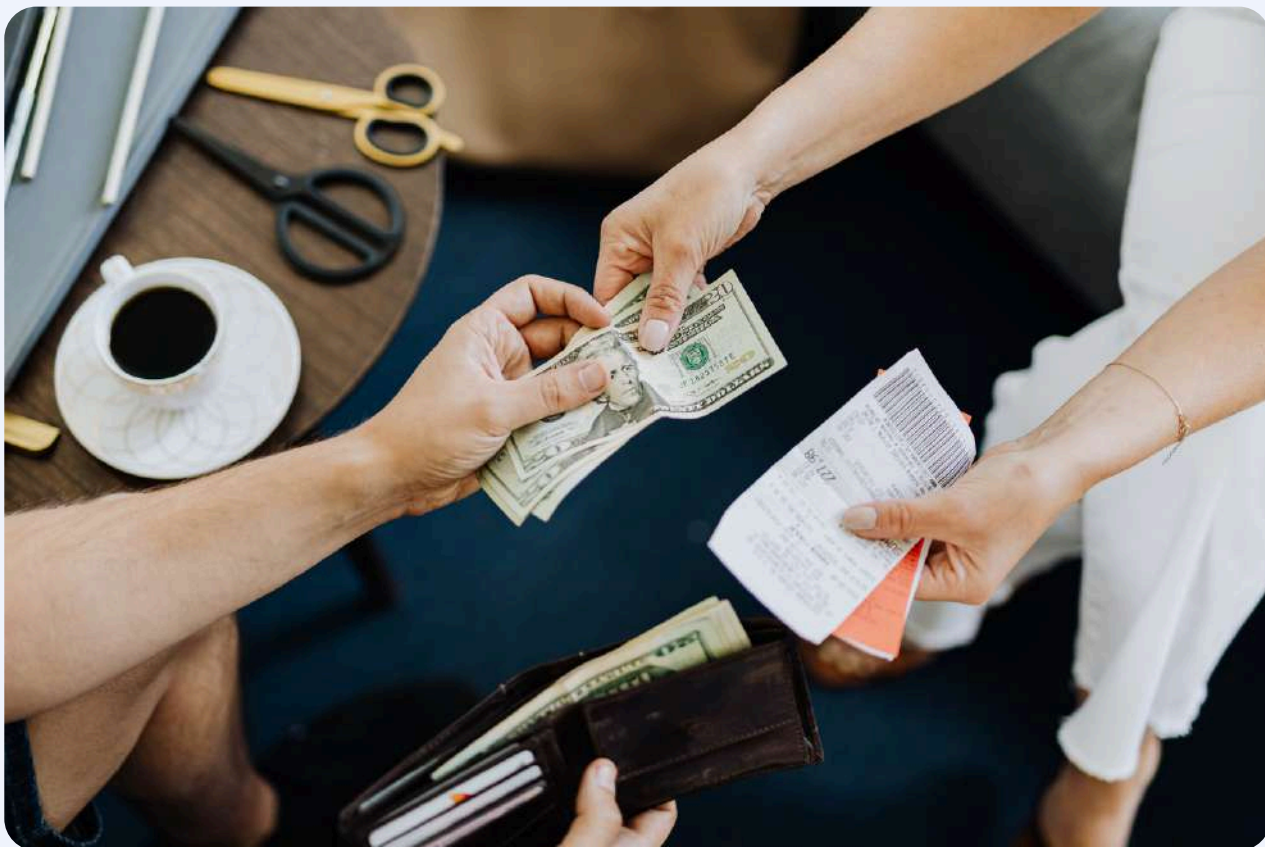
To confirm and ground your process, we recommend your team do sensitivity tests for not only relevant strategic alternatives but also systemic sensitivities.

These can include:

- Price changes
- Market demand
- Capex needs
- Transportation, chemicals & other costs
- Raw material, energy, labor costs
- Regulatory requirements
- Currency fluctuations

(Our Weissr Capex platform facilitates all of this, and more.)





Finding the collection of strategic decision that generates maximum cash flow is one thing. Figuring out whether the company can pursue that strategy is another.

At this point, you must interrogate whether each strategic candidate is practical to execute considering current resources, financial restrictions and customer expectations. Can it be funded without going to the capital market?

These issues are potential limitations. A useful feature of our strategic model is that it can estimate the cost of such limitations down to the dollar (of your preferred currency).

If your company cannot find the financial resources to support the most attractive alternative, you might need to pursue your second-best alternative.

Execution and governance

After potentially hundreds of strategic building blocks and strategic alternatives have been created, analysed, compared and subjected to sensitivity analysis, one alternative will emerge as the winner.

Now your team needs to translate this strategy into communicable and actionable steps. We describe this process further in our book “Redesigning capex strategy”.

How does this capex strategy process relate to the Capital budgeting and Capex management process? It does not need to replace it, but rather adds a new dimension to it.

The short- to medium-term capex process works more or less in the same way, no matter what industry or country considered.

Want to know more about redesigning capex strategy?

Our comprehensive book on the subject might be of interest.



Read now →

Let's look at a common setup:

Capital budgeting (time frame 1-3 years)

- Gather capex needs and opportunities in the company
- Prioritize and rank
- Approve total capex budget (often based on historical or depreciation levels)
- Follow-up on the capex budget during the year
- Reallocate capital as needed due to unforeseen events

Capex management process (day-to-day operations)

- Submit requests, analyze and route through various checkpoints
- Base decisions on KPIs (Payback, NPV, IRR etc.) and if space within the budget
- Execute capex request and update project actuals and forecasts
- Post completion review for finalized projects (often skipped)

This setup works from a pure control and administrative point of view. But it needs strategic steering:

Where should capital be allocated? In what businesses and sites should it be invested? What should be done now, versus 5-10 years from now? How much should be allocated?

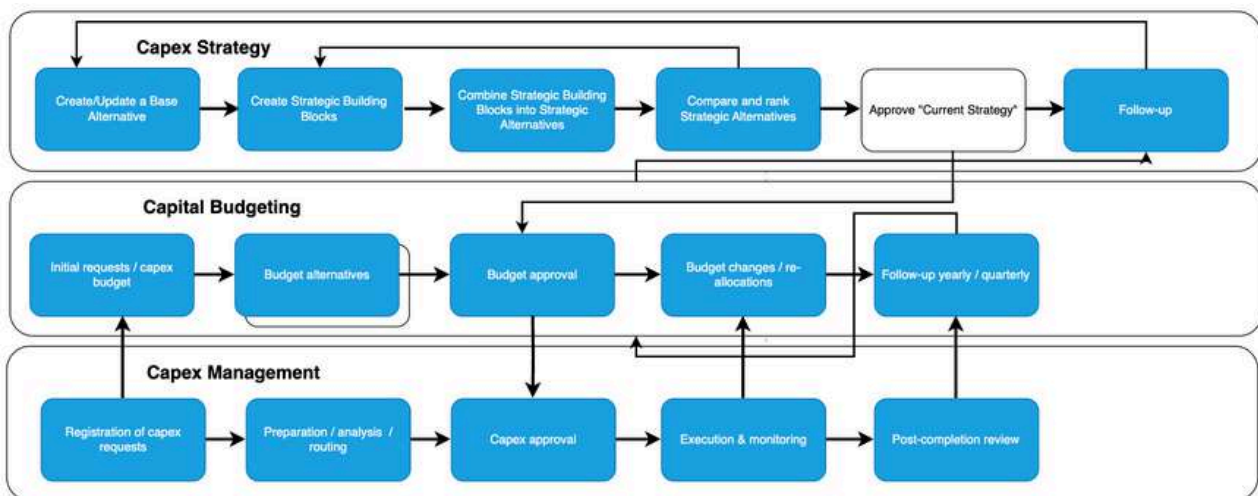
In most companies, the process just described is a tail that wags the dog. *It puts the cart before the horse.*

Your Capex strategy dictates the rules

Your capex strategy should dictate what specific capex needs and opportunities are included in the capex budget, and ultimately what decisions are made.

The capex *strategy* now informs which sites to invest in, and under what conditions – and *not* the payback, NPV and IRR of individual capex projects.

In this way, the capital budgeting process goes from being a piecemeal ranking process to being the vehicle of the strategy.



Now, we have added a proper capex strategy layer to the overall capex process.

All of your capex, all in one place.

The Weissr Capex platform changes how you work, from strategy to execution, to simplify your capital allocation process.

CAPEX
STRATEGY



CAPITAL
BUDGETING



CAPEX
MANAGEMENT



We bring your strategy to life.

Our capital budgeting and capex management software simplifies both governance and execution.

Streamline your Capex management process. From start to end.

Managing capex information in a capital intensive business is extremely time consuming when data are spread out across different systems and markets, putting your business at risk of delays and cost overruns. Save man hours by giving everyone in the company a single and simple place for all capex needs.

See the actual status of your Capex portfolio. In real-time.

Tracking the status of a large capex portfolio is challenging without a clear overview and transparency as to real-time changes - resulting in slow decision making, missed opportunities and misallocation of resources. Our platform ensures you have full insight into the current status of your capex portfolio.

Get a single source of truth for your Capex. Across the entire organization.

When the company lacks a shared source of truth for capex, you can't rely on the data you need for strategic decision making. And when there is no traceability or version control in the process, "the truth" becomes porous, where the smallest mistake at one point can compound. This is why the Weissr capex platform is designed to be as friendly to regular users, as it is powerful for you.

Curious about the **Weissr Capex Strategy** platform?

For decades, we have partnered with some of the largest **capital intensive companies** in the world. Our approach has been validated with results at over 1,000 production sites globally at a combined replacement value exceeding \$700 billion and cash flow boosts ranging from 20% to 100%.

Now, our capex platform makes it easier than ever to streamline your capex process.

All your capex data. In one place.

[**Explore**](#)

Get in touch

🌐 sales@weissr.com

📞 +46 031 93 47 77

✉️ www.weissr.com

weissr
capex