

# Circular Failure

Barriers Preventing the Success of  
Large Corporate Circular Projects

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## CIRCULAR FAILURE | BARRIERS PREVENTING THE SUCCESS OF LARGE CORPORATE CIRCULAR PROJECTS

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# Samenvatting

Wij onderzochten zestien grote circulaire projecten op belangrijke factoren voor succes of falen, door middel van interviews met interne sponsoren, (voormalige) CTOs en projectleiders. De projecten waren samen goed voor >2.5 miljard euro kapitaalinvestering, >1 miljoen ton product en meer dan 1.8 miljard euro jaarlijkse omzet. Vijftien van de zestien projecten gingen om de productie van plastics, chemicaliën of halffabrikaten. Vijf projecten zijn geslaagd of dichtbij slaging, elf projecten zijn uiteindelijk niet succesvol.

Van de negen factoren die de slagingskansen beïnvloeden zijn er drie duidelijk dominant: 1) cash- of groei mindset 2) leiderschap en 3) het omgaan met risico.

Succesvolle bedrijven hebben voldoende financiële armslag om een project door een economisch dal heen te trekken. De aanwezigheid van het juiste leiderschap is kritisch, dat wil zeggen de wil om eerst een transitie-strategie te ontwikkelen en vervolgens consistent zowel het bedrijf (intern) als aandeelhouders (extern) daarin mee te nemen. Toezeggingen vanuit de waardeketen om de commerciële risico's te verlagen, en politieke stabiliteit zijn belangrijke externe factoren. Projecten door private bedrijven hebben een grotere kans op succes en/of als het project onderdeel is van een strategische omslag ("er is voor ons geen alternatief").

Niet-succesvolle projecten zijn vaak het resultaat van een verandering in het denken van een groei naar een cash gedreven model, vaak als gevolg van slechte economische tijden of een strategische herijking. De afwezigheid van sterk en mobiliserend leiderschap, soms als gevolg van een wissel aan de top, wordt dan al snel een barrière voor de continuïteit van een circulair project.

Bedrijven die drijven op commodities met een lage marge en met een beperkte capaciteit voor productontwikkeling staan intrinsiek op achterstand: het ontbreekt hen vaak aan de juiste vaardigheden en competenties voor het succesvol afronden van transformationele projecten. Ook zijn ze in de basis niet ingericht op het nemen van grote risico's.

Vrijwel alle geïnterviewden waren pessimistisch over de bereidheid van gevestigde bedrijven om een leidende rol te nemen in de circulaire transformatie. De consensus is dat deze te gefocussed zijn op korte termijn aandeelhouderwaarde om nog een leidende rol te kunnen spelen.

Interventie is mogelijk vanuit de leiding van het bedrijf, en via een betere buy -in van de waardeketen. Onze resultaten suggereren dat hiervoor facilitatie, support of zelfs regie nodig zal zijn, bijvoorbeeld vanuit overheid, klanten of verzekeringspartners.

# Abstract

We investigated sixteen large corporate circular projects for success and failure factors, by interviewing higher management sponsors, key staff and project leaders. The projects represent >2.5 billion euro total capital invested, >1 million tons in annual product, and >1.8 billion euro annual turnover. Fifteen of the sixteen projects were aimed at producing plastics, chemicals or intermediates. Eleven projects were prematurely terminated, and five projects were completed or are close to completion.

We identified a total of nine factors that influence the success of these large circular projects. Three factors are dominant: 1) growth- or cash mindset; 2) corporate leadership; and 3) risk-taking culture.

We found that successful projects are run by corporations that have sufficient financial stability to continue to support the project throughout a business downcycle. Corporate leadership, its ability to develop a corporate transition strategy and consistently mobilize both corporation and shareholders, is critical. Value chain commitment, de-risking the market exposure of the project, and political stability are important external factors. Successful projects are more likely within privately-owned corporations, or in cases where the project is a necessary element of a strategic corporate transition process ("there is no alternative").

Unsuccessful projects are often the result of a change from a growth- to a cash mindset. This can be triggered by challenging business conditions or due to corporate strategic redirection. We found that the lack of strong and mobilizing corporate leadership, sometimes triggered by a change in leadership, was an important barrier for project continuity.

Commodity-type corporations with low product margins and limited product development capabilities intrinsically struggle to deliver transformational projects, as they lack the skills, competencies and the culture of risk-taking to be successful.

Despite the success of some projects, nearly all the interviewed participants are pessimistic about the willingness of existing corporations to take a leading role in the circular transformation. The consensus is that corporations today are generally too risk-averse and too focused on short-term shareholder value to be successful in driving the circular transition.

We found a difference between external communication of barriers for failed projects, and the results from this study. In official communication, the barriers technology maturity and existing regulation are most often mentioned as reason for project termination, in contrast to the actual top three barriers found in this study.

Interventions are possible at the corporate leadership level, and by integration across the value chain, but our results suggest they may need facilitation, support or even enforcement from external parties like government, insurance companies, customers and shareholders.



# URGENCY...

The year 2024 has been recognized as the warmest in recorded human history, with an average global temperature of 1.6 °C above pre-industrial levels [Copernicus, 2025]. Reaching the goal of the 2015 Paris Agreement [2015] that sought to limit the increase to 1.5 °C is becoming increasingly unlikely. There is broad scientific consensus that continued global warming will lead to the rise of seawater levels and an increase in extreme weather events affecting human life, natural habitats and economy [IPCC, 2023].

The Netherlands has committed to the Paris Agreement and has produced policy documents on achieving net-zero CO<sub>2</sub> emissions by 2050 [NL government.nl, 2023]. In addition, recent publications from governmental think-tanks have provided the first bottom-up targets for renewable energy, biofeedstocks and recycle feedstocks, all required to achieve circularity by 2050. A first publication from 2023 focuses on achieving a climate-neutral energy system for the Netherlands [RVO, 2023]. More recently, a second

policy document by the independent governmental agency Planbureau Leefomgeving describes different scenarios for a climate-neutral industry in 2050 [PBL, 2024].

For the material economy (chemicals, intermediates, finished products) the transition to circularity requires the replacement of fossil-based feedstocks by recycled feeds and/or bio-feeds:

- a scenario by the NOVA institute reports a **global** demand of 135 million tons of bio-based feedstocks by 2050, and 750 million tons of recycle feeds [NOVA 2024],
- for the **European** region, PlasticsEurope has estimated a demand of 11 million tons of bio-feeds and 27 million tons of recycle feeds by 2050 [PlasticsEurope, 2023],
- for the **Netherlands**, the Planbureau Leefomgeving estimates a need for 228 PJ of bio-feeds by 2050 [PBL, 2024], which translates to ~13 million tons of bio-based feedstock.



# ...BUT LITTLE PROGRESS

Despite the international urgency on climate change and the need for new solutions to become commercial within the next 25 years, the number of large circular projects that have been developed by the chemical industry has been limited. A recent overview for bio-based building blocks and polymers shows just 4 million tons of bio-based plastics production in 2022, against 382 million tons fossil-based production [NOVA, 2021]. Plastics recycling is at 9% globally (mainly driven by PET-bottle returns) but appears to be struggling. In 2024 no less than five Dutch commercial recyclers went bankrupt [Eenvandaag, 2024].

With international commitments to reach net-zero emissions just 26 years away, one would expect the major chemicals-producing corporations (who are still producing 99% fossil-based plastics in 2022) engaged in transition strategies, large-investment projects or

investment opportunities. This hardly seems the case: only a few companies have been able to convert some of their products to bio-based or recycled feedstocks [for example Braskem, 2024, Eastman, 2024], and recycling has hardly moved beyond the existing PET technology. New technologies are emerging from startup companies instead of established chemical corporations. Overall, the picture at the start of 2025 shows an established chemical industry that is struggling to develop and deliver the large circular projects that are required to meet market and societal needs in a “net-zero” economy by 2050.

In this whitepaper we investigate this lack of progress from interviews with higher management sponsors, key staff and project leaders and by subsequent analysis of barriers and enablers mentioned by these participants.

# PROJECT SCOPE

Corporations – large and small – are all influenced in a major way by external factors: they operate in a market environment which can be attractive or extremely competitive and they are influenced by shareholders or owners. They also operate in a regional or global political climate, and deal with shorter-term regulations in their home and target markets. This study recognizes these external influences but is aimed at understanding the corporate-internal responses to them, and the corporate culture and processes that affect the success or failure of large circular projects. A schematic depiction of the project scope is provided in Figure 1.

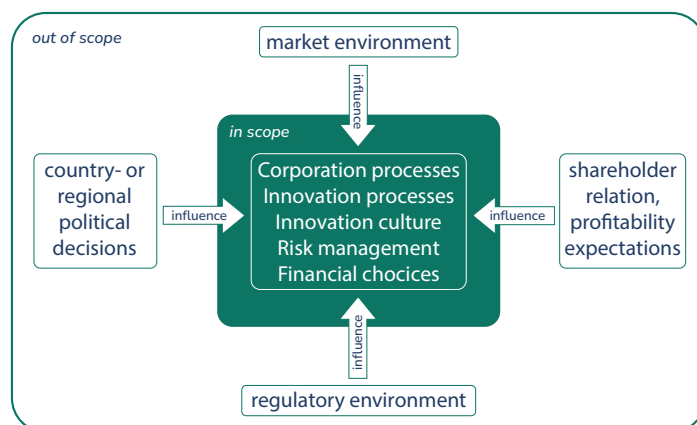


Figure 1 - Scope of the investigation

# PROJECTS INVESTIGATED

We investigated sixteen projects overall. Seven of these projects involved developing bioprocesses, six projects were aimed at recycling, and the remainder were polymer production, energy production and production of a chemical intermediate. The projects represent between two and three billion euro investment cost and one million tons of product. The prospective value of the resulting

products could be ascertained for nine of the projects, amounting to ~2 billion euro. The combined market capitalization of the corporations involved is approximately 350 billion euro.

Of the sixteen projects, eleven were prematurely terminated and were classified as unsuccessful while five projects were classified as successful.

Note that the latter category contains projects that have led to commercial success, but also projects that are operating commercially but are not yet profitable, and a single project which is well progressed and expected to be profitable upon completion. An overview of project characteristics is provided in Figure 2.

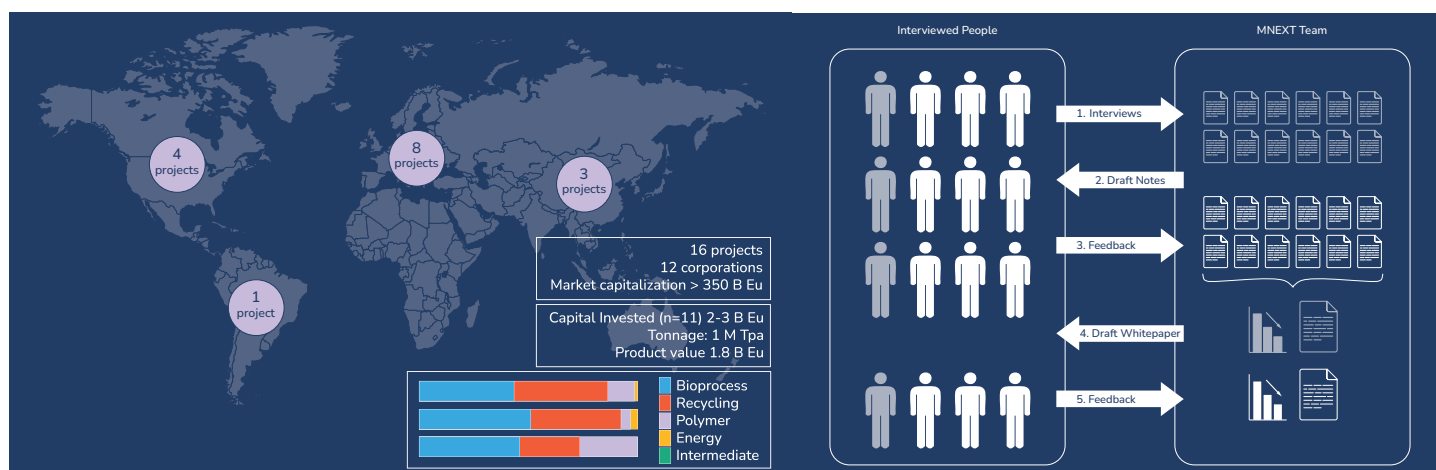


Figure 2 -Overview of projects covered in this study (left), and the process of interviews and reporting (right)



# INTERVIEWS

We interviewed twelve individuals (ten male, two female) for this analysis, covering a total of sixteen projects. All individuals were of corporate background, either working actively or employed at the time of the project. The majority were higher management/internal project sponsor (seven persons) or directly involved as project leader (two persons) or key supporting roles (three persons). In addition to the interviews included in the analysis, we interviewed four individuals for general context and referrals. Their feedback was not used for the project-barrier ranking.

We conducted the interviews in an informal setting. Notes were taken by hand and compiled in a discussion report which was submitted for approval to each participant. All individual interviews were kept confidential between the interviewed person and the project team, allowing participants to speak freely and provide their personal view as well as the corporate account of events.

Prior to the interview we sent a questionnaire with example questions, which served as a guide for discussion. During the interviews we asked the

participants to discuss details of their specific projects. Subsequently we asked the participants to reflect on the most important barriers or enablers for success or failure (this often already happened as part of a free-flowing discussion).

Following each interview, we prepared written notes which were shared with the individual for approval. A draft version of this whitepaper was shared with all interviewed persons prior to publication.



# MAIN OUTCOME - LIST OF BARRIERS

Based on each interview, we selected the top three barriers (or enablers) for project execution. We scored these barriers (in case of project failure) or enablers (in case of project success) as follows: nine points for the most important barrier/enabler, three points and one point for rank two and three respectively (this scoring system is used in six sigma methodologies [sixsigma, 2024]).

In Figure 3 an overview of the combined score of barriers/enablers is provided. Table 1 provides a list of these barriers/enablers, and a short description of how they were featured in the interviews.

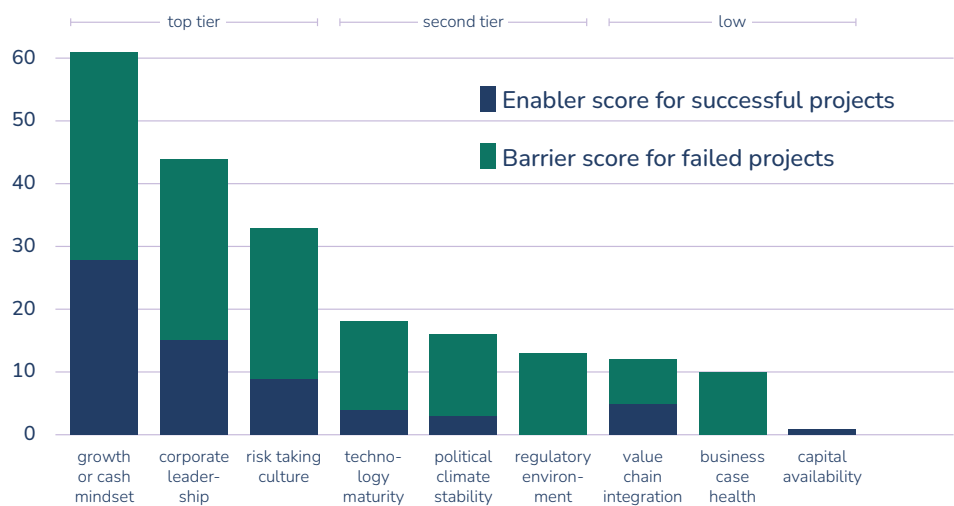


Figure 3 - Total score of barriers or enablers for sixteen projects

barrier or enabler	ranking from this study	
growth or cash mindset in company	top tier	reflection of the business cycle often encountered in chemicals: if the businesses are doing well, then generally there is a “growth mindset” driving sustainable project; in “poor” years or crisis situations, companies can switch to cash mindset and projects are judged on shorter-term deliverables
corporate leadership		the strength of corporate leaders (CEO, leadership team) to maintain a growth strategy and communicate effectively with stakeholders and shareholders
risk taking culture		general company culture in being rewarded for taking risk or for avoiding risk
political climate stability	second tier	are the regulatory changes predictable or very uncertain? For example: can a company count on a new product approval within a predictable time?
regulatory environment		current, existing regulatory environment being supportive or not for circular projects
technology maturity		is the proposed technology for the project capable and scaleable
value chain integration	low	are customers in the value chain committed (eg MOU) or participating or do they continue to play a lowest price procurement strategy
capital availability		access to capital
business case health		ability of the corporation to get a credible positive business case

Table 1 - List of barriers and enablers as mentioned during the interviews



# TOP THREE BARRIERS AND ENABLERS

Figure 3 shows that three barriers/enablers stand out: growth-, or cash mindset, corporate leadership and risk-taking culture. Of these, **growth-, or cash mindset** has been the highest ranked barrier or enabler and was mentioned for nine of the sixteen projects. In three projects where growth mindset was reported as an important enabler for success, the corporation was privately owned. These companies' longer-term growth ambition ensured sustained support during the project both in successful and unsuccessful project phases. In another example the successful development of a bio-based product line was driven by the growth ambition to become a world player. It was judged that, even in the absence of a short-term business case, the

## Surviving the economic downturn

Three of the five successful projects have weathered an economic downturn. Main observations for these projects:

- 1) the successful projects in this study cover recycling, polymerization and energy. No large bio-project has survived an economic downturn;
- 2) for three successful projects, management has internally and externally communicated the new technology as central to the corporations' strategy;
- 3) three of the five projects were run by a privately owned corporation and not pressured by short-term shareholder needs.

dividend of the project would be for the corporation to become recognized as a thought leader and become a go-to partner for customers (brands) in the value chain.

In publicly traded corporations a switch from growth focus to cash focus was indicated as a dominant reason for project failure. External influences like the Covid pandemic or the Ukraine war catalyzed such decisions. This was the case for four of the five recycling projects (the fifth, successful one, also having incurred a delay due to Covid). In another discontinued project, the corporation changed ownership during project execution, leading to a high cash mindset and ultimate de-prioritization of the project. It was noted by some that the change to a cash mindset can occur quite rapidly, for instance by curtailing out-of-pocket expenses and centralizing spending approvals, making it difficult for subsidiaries to continue regional projects.

The role of **corporate leadership** was the second-highest scoring enabler/barrier. In the interviews the role of leadership was often mentioned as a cause of project *termination*. For example, for two projects a long-standing champion CEO with a protective view of long-term sustainable development was succeeded by a candidate with a shorter-term view, ultimately leading to project termination.

In one successful project the corporate

leadership concluded that a major investment in recycling technology needed to be made to secure the corporation's long-term business leadership. They presented the case for this transition to their shareholders and were able to get sustained support for multiple years.

A general comment was that projects benefitted from strong, experienced CEOs that were able to deal with the external market and shareholders, as opposed to less experienced CEOs potentially more sensitive to short-term demands from shareholders. Similarly, experienced leaders were more willing to deal with unexpected project costs.

All candidates agreed that the development of large circular projects represents more technical uncertainty and longer timelines compared to general innovation projects. For this reason they depend more strongly on sustained strong corporate leadership for success.

A culture of **risk-taking** (or its absence) was the third highest-scoring success factor. Most participants noted that corporations have a very high level of internal risk management protocols and processes, creating a culture of compliance rather than of entrepreneurship which does not favor long-term circular projects. Participants also noted that large European corporations are very risk-averse compared to their US or Asian counterparts, leading to a preference >>

## Corporate transformation roadmap, CEO legacy and project success

Successful projects are connected to a strategy of business transformation. In such cases the leadership teams and the CEO become the face of the transformation, and the projects become flagships.

If the project is not part of a well-communicated path of transformation, then the sustained buy-in from personnel, stakeholders and shareholders is jeopardized and the risk of early termination is higher.

The motivation of corporate leaders to undertake this transformation appears partly driven by a desire for legacy: a mission to make a personal impact. Supporting a CEO in business transformation and legacy building can make good sense for the success of the (flagship) projects.

for projects with a short-term payback instead of strategic investments.

Risk aversion is particularly present for commodity corporations competing strongly on cost. For these, operational excellence, incremental improvements and process optimization have become a necessary culture.

However, such a culture is not the right foundation for large circular projects. In one example, a bolt-on project with a good business case, guaranteed offtake and capital availability was still struggling to find a commodity-business owner due to the process being deemed too complex for the existing technical community.

# SECOND-TIER BARRIERS AND ENABLERS

For four projects, the absence of a **stable political climate** was an important barrier. For one chemical recycling project it was even considered the major barrier, as a regulation change by the European Food Safety Authority (EFSA) triggered uncertainty with customers who pulled their commitment to the project. Other political examples were regulation changes post U.S. elections, and uncertainty about the use of first-generation bio-feedstocks in non-food applications. Political stability was never mentioned as an *enabler*.

## Barriers and enablers that are externally communicated are different from the actual ones

In this study we found that externally mentioned reasons for terminating projects are different from those indicated by the participants. business case health, regulatory environment or technology maturity are mentioned most often. In contrast, growth- or cash mindset and corporate leadership are only mentioned in the case of success. As one of the interviewed managers indicated: “using the business case [as reason for project termination] is an intellectual alibi”.

**Technology maturity** was considered the most important barrier for one project and was a secondary factor in five other projects, both for bioprocess and recycling projects. In two cases the main technology issue was in the upstream part of the process, where bio-feed/recycle-feed handling and quality issues proved detrimental to the process. In addition, in one of the successful recycling projects the quality of recycle-feed led to a delay in startup.

For three projects, lack of an **existing regulation** was flagged as a barrier (one recycling, one intermediate and one bioprocess). For the project aimed at producing a sustainable chemical intermediate, the inadequacy of existing regulations was deemed the most important factor as the corporation was faced with customers/brands unwilling to pay a small premium for a drop-in sustainable alternative. In contrast, other projects in this study were more strategically positioned to align with future legislation, and therefore not exposed to existing regulation.

**Value chain integration** was important to six projects. For three projects, the take-or-pay commitment of product offtake by customers was an important factor to project success. Lack of (sustained) customer commitment was a



*Flagship projects are required*

barrier to three projects, one in recycling, one in bioprocess and one in commodity intermediates.

Initially we found it surprising that **business case health** did not feature among top barriers or enablers, particularly since absence of a business case is often communicated to the outside world as the dominant reason for terminating a project. The explanation is that most of the projects in this study were strategic in nature, taking multiple years to develop and aimed at a future regulatory market situation. The projects did not rely on a tactical business case, but on the corporation's belief in being successful in a future market (or, as someone commented: "the initial business case always stinks").

Ten of the projects were principally financed from within the corporation. Three projects were executed in a joint-venture, and three projects used external funding. This

allowed for sufficient capital and may explain why **capital availability** was never mentioned as a barrier for execution. We did consider that perhaps the projects in this study were not large enough for capital availability to be a barrier. A society-wide circular transition will require even higher scaling, leading to so-called "first-of-a kind mega projects" requiring multiple billion euro investment per project. At such scale, even corporations need support from large financial institutes, and capital availability may then become a major barrier.

For the projects with external (additional) funding, the full financing was typically decided upfront (including market development). This contrasts to projects at start-up companies, where the investment capital is often split up in separate funding pitches at increasing TRL levels. Hence, the famous 'Valley of Death' was not a major concern for corporations in this study.



# BARRIERS IN THE CONTEXT OF BUSINESS PROCESSES

We noted that business case health scored surprisingly low as a barrier. Likewise, three other barriers that are considered elements of a business case scored low: regulatory environment, capital availability and technology maturity. All of these are present-day factors that support a project launch decision, typically run at the divisional level through a stage-gate process. However, the large circular projects in this study are more strategic in nature, and more speculative. They are aimed at a future market situation, depending on future regulation rather than developing proven technology into an existing market and regulation environment.

For this reason, large circular projects are weighed at the corporate level. Here they compete with other strategic

investments such as mergers & acquisitions or existing (fossil) business expansions. At the corporate level the barriers growth/cash mindset; corporate leadership, risk taking culture play a more important role, which explains the high ranking of these in this study.

The two remaining barriers, value chain integration and stable political climate, are both also strategic in nature, but they did not end up in the top three barriers. We believe these barriers have an external origin and are being weighed and managed as risks or liabilities for the projects. This makes them important but less decisive when compared to the top three internal barriers. Figure 4 shows a graphical description of this business decision context for the nine barriers.

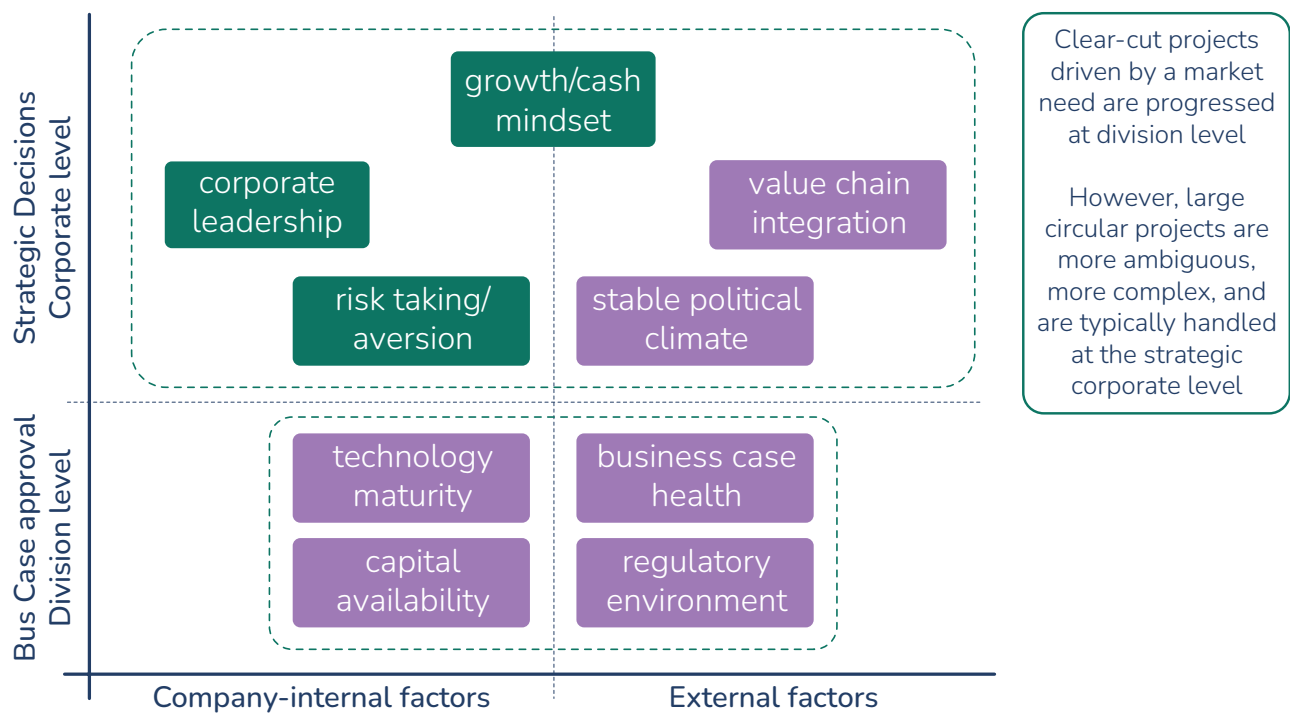


Figure 4 - Relating corporate decision processes to barriers for large circular projects. The three top-tier barriers are indicated in green

# INTERVENTIONS

From our study a picture arises in which large circular projects are managed at the corporate level, as they are too strategic to be progressed at the divisional level. At this level we find five barriers, of which two depend on external factors, and three are corporate-internal. Here we consider possible interventions to prevent these, or to strengthen enablers for large circular projects.

Of the top three barriers, we believe **corporate leadership** provides the strongest opportunity for intervention. We found successful projects at corporations where the circular projects were part of a well-communicated corporate strategy for growth. This aligned the corporation with shareholder/owner and allowed for a sustained investment through economic challenges. According to some of the participants, strong corporate leadership also translated into a motivated and creative workforce, confident to deal with project setbacks. A related aspect was market leadership: “if any corporation is going to drive this change, it should be us”. Such an ambition results from being a thought leader in the market, often with a track record of innovation.

Hence, we believe that the development and communication of a corporate strategy on how to win in a future circular market (as opposed to a strategy on how to meet future regulatory targets) is a leadership intervention for success. The presence of an agreed circular strategy and strong leadership will then also help to keep projects supported in times of economic downturn.

Not all corporations in this study have the means to be a technical market leader. Some operate in a highly commoditized market and are squeezed between dominant feedstock suppliers and large brand owners. Such market conditions lead to a culture of incrementalism and risk avoidance

within the company and with shareholders. It also leads to a procurement-driven relationship with the customer, who prefers to manage their suppliers on short-term cost instead of long-term sustainability. As one person said: “we are trapped between market conditions and the shareholder base”.

One possible intervention for such a market situation is to involve the full value chain to contribute the transition to circularity. This is not always easy, as many brand owners are still mainly managing their commodity suppliers on price before anything else. Here government facilitation or intervention may be required, as for instance has been done in the development of a circular value chain for mattresses in the Netherlands [Jacqueline Cramer, 2020].

In the case of a highly commoditized value chain, our results also indicate that in addition to value chain involvement, additional innovation capabilities will be required to guide and support step-out innovation beyond existing technology.

## General culture of risk-aversion

Nearly all large corporations in this study were described by participants as risk-averse, with a high level of control over business processes and little room for entrepreneurship. This is a culture where smaller, incremental projects are favored, and large strategic projects face strong scrutiny. According to one commentor: “the chemical industry is locked in a way that resists change towards circular business models”.

Ironically, such a risk-averse mindset poses a major threat to the continuity of the business. With the year 2050 just over two decades away, it is becoming increasingly likely that a do-nothing scenario will fail to lead to GDP-like growth. We believe that, without a strategic plan on how to be successful in a circular market, corporations will rapidly face challenges from customers or shareholders as soon as the first disruptive startups will become successful.

External partners can help a corporation to develop such a circular strategy. Governments can make it a requirement before deciding to support large circular projects. Customers and brand owners can take a larger responsibility across the value chain. But also shareholders and insurance companies can play a role.



# CONCLUSIONS

Successful circular projects are run by corporations that have sufficient financial stability to continue to support the project throughout a business downcycle. The discussions emphasized the importance of strong corporate leadership, and its ability to mobilize consistent support within the corporation and from its shareholders. For successful projects, customers in the value chain made commercial commitments, thereby de-risking the market exposure of the project. Political stability is an important factor, but for successful projects there was a corporate belief that the solution being developed is the right way forward, and regulation will follow, even if not yet in place.

Successful projects were reported for privately-owned corporations, but also for a public corporation that had embraced and communicated the project as a necessary strategic element of their corporate transition process, realizing and communicating “there is no alternative”.

Unsuccessful projects suffered from poor corporate financial stability due to changing business conditions or from corporate redirection towards short-term cash generation at the cost of long-term projects (for instance after a leadership change). Lack of strong corporate leadership or a change in leadership was an important factor for these projects to fail. Commodity-type companies with low product margins and limited product development capabilities struggle to deliver transformational projects, as they lack the innovation- and market development skills and the culture of risk-taking to be successful.

Despite the success of some projects, nearly all the interviewed participants were pessimistic about the ability or willingness of large corporations to take a leading role in the circular transformation of materials. The consensus was that corporations today are too risk-averse and too focused on shorter-term shareholder value to be successful in driving the transition. Interventions are possible at the corporate leadership level, and by integration across the value chain, but our findings suggest they may need facilitation, support or even enforcement from external parties like government, insurance companies, customers and shareholders.

# METHODOLOGY DETAILS

This project was run as a multiple-case study as described by Yin (2014). Each project was discussed as a separate case, and an integrated analysis was performed on the sixteen projects together, leading to this whitepaper.

A total of twenty candidates were approached for discussions, of which four declined, four others were able to provide general context and acted as an entry for interview candidates, and another twelve were interviewed for this study. The candidates were approached through the network of the authors, and occasionally through LinkedIn connection. All had played a major role in large sustainable projects while being part of a corporation. As part of the invitation, candidates were sent a 4-slide project brief, and a letter detailing the type of questions being asked and the protocol for confidentiality.

Interviews were preferentially organized as face/face meetings (this proved impossible for four discussions). Notes were taken manually and shared for approval within two weeks after the interview.

Prior to the interview we sent a questionnaire with example questions, which served as a guide for discussion. During the interviews we first asked the participants to discuss details of their specific projects. Subsequently we asked the participant to reflect on the most important barriers or enablers for success or failure (this often already happened as part of a free-flowing discussion).

Following each interview we prepared written notes which were shared with the individual for approval. A draft version of this whitepaper was shared with all interviewed persons prior to publication.

Based on each interview, we selected the top three barriers (or enablers) for project execution. We scored these barriers (in case of project failure) or enablers (in case of project success) as follows: nine points for the most important barrier/enabler, three points and one point for rank two and three respectively (this scoring system is used in six sigma methodologies [Sixsigma, 2024]).

The original brief of the project, example letters and detailed documentation on the project execution can be requested from the author: [wbs.vanliemt@avans.nl](mailto:wbs.vanliemt@avans.nl).

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