



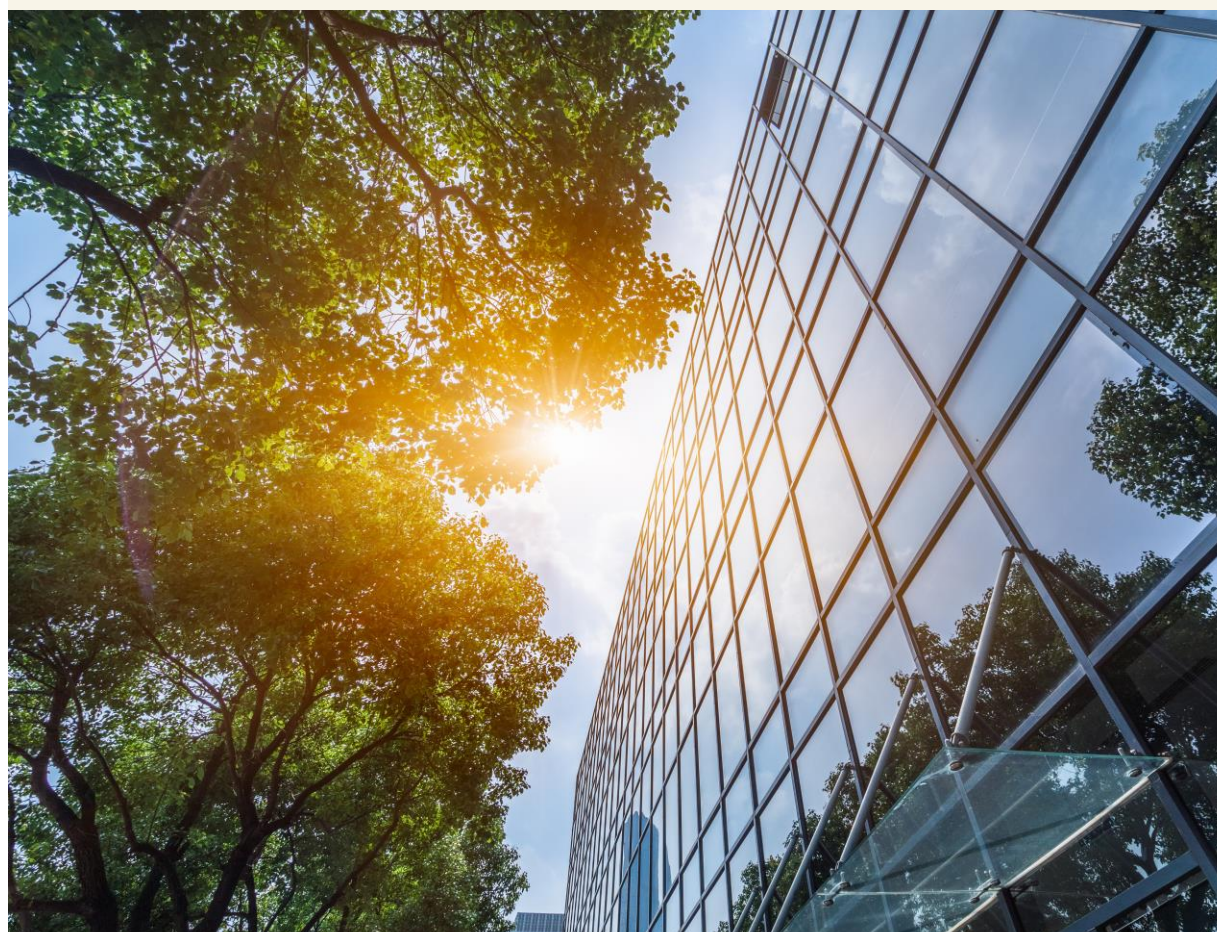
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REPORT JULY 2022

FINANCING THE TRANSITION IN GERMANY AND THE WORLD

PROPOSALS TO REFORM KFW AS AN
INNOVATION AND INVESTMENT AGENCY

JOHANNES SCHROETEN & CONSTANTIN MEIER





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E3G is an independent climate change think tank with a global outlook. We work on the frontier of the climate landscape, tackling the barriers and advancing the solutions to a safe climate. Our goal is to translate climate politics, economics and policies into action.

E3G builds broad-based coalitions to deliver a safe climate, working closely with like-minded partners in government, politics, civil society, science, the media, public interest foundations and elsewhere to leverage change.

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Summary

Germany's Kreditanstalt für Wiederaufbau (KfW) is among the largest development banks in the world with €564 billion in assets (December 2020). Financing sustainable development in Germany, the European Union and in the global south, the bank group is an allrounder and key asset for Germany's economic, development and climate policy implementation. The new German government's coalition agreement envisages the transformation of the KfW, one of the world's leading promotional banks, into an innovation and investment agency. KfW can make a crucial contribution to putting Germany on the path to climate neutrality by 2045 and integrating climate targets into trade, foreign and development policy. To this end, action is needed in the following five areas.

1. **Reform of the KfW mandate:** The KfW Law should be reformed to enshrine the central task of achieving Germany's climate neutrality by 2045 (and the corresponding consequences regarding development policy) in the banking group's mandate.
2. **Alignment of governance structures:** The goal of climate-neutral transition is institutionalised and anchored in the bank's "DNA". The mandates of the sustainability teams in KfW's branches should be expanded to ensure group-wide coherence on achieving climate-related targets. Increased cooperation and dual-reporting to the group's management board as well as to the boards of the individual branches will further promote a uniform group-wide approach. Expansion of the board of directors to include members from civil society is also crucial. Additionally, instruments such as impact-based, variable remuneration will incentivise the workforce.
3. **Further development of KfW's mission-oriented approach:** The dynamics of the climate-neutral transition require that KfW's mission-oriented ambition is harmonised with Germany's domestic and international climate policy goals. Specific missions are being developed that specify both KfW's role in shaping a sustainable financial system and its tasks in financing the transition in key sectors. The International Energy Agency's "net zero report" will form the basis for KfW's strategic direction.



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4. **Leveraging KfW investments:** With the help of five investment principles, promotion and cooperation with intermediary financial institutions will be more strongly focused on the transition to a climate-neutral society. Central to this are targeted support for innovation, risk mitigation and scaling of investments, as well as technical and financial support for the development and implementation of transition plans.
 5. **KfW's role in national and international climate protection:** KfW's responsibilities should be clearly formulated in the German government's announced climate-related legislative initiatives and in the context of the German G7 presidency. The goal is to drive the transition in key sectors, both nationally and internationally, with maximum impact. The focus is on fostering innovation as well as leveraging private, transformational investment.

Background

The German government has announced an ambitious modernisation programme to put Germany on the path to climate neutrality by 2045. In his first government declaration, chancellor Olaf Scholz described the task of achieving climate neutrality as "the biggest transformation of our industry and economy in at least 100 years".¹ Climate neutrality and societal resilience are cross-cutting issues that affect and change economic, financial, foreign, security, social and environmental policies equally. Such a transformation of society, the state and the economy, will only be successful with targeted public investment and support programmes both at home and abroad.

A study commissioned by KfW puts the required additional investment volume for Germany alone at €73 billion per year over the next three decades.² As the federal government's scope for investment is limited due to the debt brake, however, public investment must be made with maximum efficiency and effectiveness. In this context, the German government announced in its coalition agreement a reform of KfW into an innovation & investment agency.³ The transition offers the opportunity to make greater use of KfW's special market position. It enables the bank to be established as both a financier of socio-ecological transition and a pioneer and accelerator in the field of sustainable finance.

¹ DW.com, 15 December 2021, [Scholz stimmt Bürger auf größten Umbruch seit 100 Jahren ein](#)

² KfW, October 2021, [KfW Research: Reaching climate neutrality by 2045 requires EUR 5 trillion investment](#)

³ German Federal Government, 2021, [Koalitionsvertrag 2021](#)



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The key challenge is to anchor the goal of climate neutrality and an understanding of the need for transition in all of KfW's business areas. The goal of climate neutrality must always be considered holistically. KfW already uses the UN Sustainable Development Goals as a benchmark for its promotional programmes. These will continue to form the basis for its work, but must not run counter to Germany's national and international climate protection targets ("do-no-harm" principle). Other priorities for the bank, such as the promotion of small to medium-sized enterprises (SMEs), social organisations or education, must not be neglected in the process. On the contrary, they must be accelerated by the goal of a socio-ecological transition. At present, KfW sometimes seems to be finding it difficult to respond to the rapidly evolving political and economic environment. For example, Germany is currently reorientating its energy policy. This makes calculations such as potentially directing up to one third of all energy investments this decade to gas-fired power plants politically, economically and ecologically out of date.⁴

In this report, we present concrete proposals for reforming KfW so that it can fulfil its role in German climate policy as a financier of socio-ecological transition. To this end, we draw on our analysis of KfW, as well as our previous experience in green bank design, to develop tailored reform proposals.⁵ These range from mandate and governance adjustments to specific investment principles and funding proposals for the federal government's announced summer package.

The climate think tank E3G has previously advised the UK government providing policy and technical analysis on the design process for the UK Infrastructure Bank, which was established in 2021.⁶ As part of the Public Banks Climate Tracker Matrix project, E3G analysed KfW with a view to its alignment with the Paris Climate Agreement.⁷ The results show that KfW is one of the leading promotional and development banks in some areas. Yet overall, there is clear room for improvement. In certain business areas, KfW's work lags behind the momentum in German and international climate policy.

⁴ KfW, 2022, <https://www.kfw.de/nachhaltigkeit/Dokumente/KEa4/Kundenversion-Paris-kompatible-Sektorleitlinien-der-KfW-Bankengruppe>

⁵ E3G points out that we explicitly address KfW as a transformation bank in climate protection. However, our reform proposals do not contradict KfW's role in digitisation or in promoting other sustainability goals, and are thus to be understood as complementary.

⁶ E3G, 2021, [UK Infrastructure Bank investment principles](#)

⁷ [E3G Public Bank Climate Tracker Matrix](#)



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Mandate and objective

KfW's mandate as a public financial institution needs to be adjusted to do justice to the long-term nature of its climate responsibilities. Its mandate derives primarily from the founding mandate laid down in the KfW Law (KfWG)⁸, with environmental protection being one of the nine core investment areas. However, with regard to climate protection or the promotion of sustainability in a holistic sense, the KfWG does not provide the banking group with a specific mandate. An adjustment should initiate and institutionalise the development of a new understanding of KfW's role for the coming decades in a way that is fit for the future.

Germany's accession to the Paris Climate Agreement establishes the bank's duty to implement the Paris climate targets. The corresponding political goals that were subsequently formulated by various federal governments, most recently the achievement of climate neutrality by 2045, must therefore also be reflected in KfW's mandate.⁹ In order to play its role in transforming Germany into one of the leading innovation and business hubs in the global race toward climate neutrality, KfW must make the climate-neutral economy the central organising principle of its activities.

It should be noted that this organising principle must be reconciled with the different priorities and modalities of the various business units, as well as any conflicting objectives. The adaptation of the mandate must allow sufficient flexibility while integrating the goal of climate neutrality as an explicit or implicit logic in all investment decisions.

Our proposal is for a passive, institutional reform of the KfW Law, ensuring that climate-neutral investment is not achieved at the expense of the bank's other mandates, such as the promotion of social institutions. One example would be the promotion of climate-neutral social housing. Following the example of the German government's climate check announced in the coalition agreement, all the bank's projects and support programs with a different impact priority must be checked for their climate compatibility and adapted accordingly. This holistic approach makes it possible to initiate investments in a just climate transition, while promoting other social policy priorities and exploiting synergies.

⁸ Federal Ministry of Justice, **Gesetz über die KfW**

⁹ Becker Büttner Held (Kanzlei) Im Auftrag von WWF Deutschland & Finanzwende gGmbH, 2021, **Gutachterliches Eckpunktepapier: Überlegungen zur gesetzlichen Umsetzung ausgewählter und weiterentwickelter Vorschläge des Sustainable-Finance-Beirates der Bundesregierung**



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Governance

KfW's governance structures must be adapted to ensure these proposals for adjusting its mandate can have the desired effect in terms of organisational awareness of the central importance of the climate transition. This includes aspects of the bank's management and board of directors, as well as the principles on which decisions are made. The following statements are guiding suggestions and should be adapted in close consultation with the banking group and relevant stakeholders.

Internalising the goal of climate neutrality

The entire board of managing directors and affiliated management structures must internalize the strategic vision of achieving climate neutrality by 2045 as KfW's core task and goal. The aim here is firstly to further strengthen the expertise and innovative strength that already exists in-house, for example in the departments that developed the TranSForm project. Secondly, it is to internalise programmatic progress in corporate management throughout the group. To this end, the sustainability departments of the individual business areas should be required to report to the CEO of KfW in addition to their reporting obligations to their respective business-unit boards. This way, the adjusted mandate in the KfW Law, as well as the approaches developed by group management in the TranSForm project, could be implemented coherently in all business areas.

As the controlling body, KfW's board of directors must comply with the bank's adjusted mandate. In addition to members of the Bundestag finance, budget and economic committees, a member of the energy and climate committee should also be part of the board. In addition to representatives from state and federal politics, and stakeholders from the agricultural, real estate and financial industries, a civil society voice from the environmental movement should also be represented. This could be, for example, a representative from the Sustainable Finance Advisory Council of the German government.

The translation of KfW's adapted mandate, as well as its strategic development, must permeate beyond management to the individual business units so that a bank-wide awareness of KfW's role as a transformative bank can develop. KfW already has impressive intrinsic motivation. Yet, additional variable compensation aligned with the transformative impact of KfW's portfolios could be considered for the entire staff body, including the board of managing directors. Appropriate monitoring and impact management systems would be prerequisites for this.



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Integration of climate scenarios in the group's strategic orientation

To adequately account for the uncertainties of transition in its strategy, KfW should be guided by robust scenarios that identify transition pathways. These should be based either on temperature targets for global warming or on time targets for achieving climate neutrality. So far, KfW has based its sector guidelines on a scenario that models the successful limitation of the temperature increase to 1.65 °C with a 50% likelihood.¹⁰ This is not timely given recent policy developments and the critically shrinking window of opportunity to achieve 1.5 °C.¹¹

KfW could adjust, for example, with the help of the International Energy Agency's (IEA) scenario for achieving global climate neutrality by 2050.¹² It should be placed at the center of strategic and organisational alignment. Guidelines, for example on financing in emissions-intensive sectors, must also be adapted accordingly. The latter could be based on the examples set by the European Investment Bank (EIB) in its climate bank roadmap.¹³

Transparency

KfW is a public institution and should feel a special obligation to communicate its activities to the public in a transparent, comprehensible and understandable manner. As a recent study published by the European Central Bank (ECB) shows, European banks are not meeting the ECB's climate and environmental risk disclosure requirements.¹⁴ As a state-owned promotional bank, KfW should live up to its exemplary function and play a pioneering role here.

The KfW development bank already provides detailed information on its actions and activities. It is important to build on this at the group level. Findings from initiatives, such as the impact monitoring or climate risk reporting developed under the TransForm project, should be made available to the general public as soon as possible. "Best practice" examples from other institutions, such as approaches in impact transparency at GLS Bank¹⁵, can serve as models. A regular exchange with civil society is also recommendable to discuss the urgent tasks for KfW as a transformative bank, thus painting a clearer picture of KfW's socio-ecological impact.

¹⁰ KfW, 2021, [Hintergrundpapier zu den Paris-kompatiblen Sektorleitlinien der KfW Bankengruppe](#)

¹¹ IPCC, August 2021, [Climate change widespread, rapid and intensifying – IPCC](#)

¹² IEA, 2021, [Net zero by 2050](#)

¹³ EIB Group, 2020, [EIB Group climate bank roadmap 2021–2025](#)

¹⁴ ECB, March 2022, [Full disclosure: coming to grips with an inconvenient truth](#)

¹⁵ GLS Bank, 2022, [Sustainability report 2021 – Success](#)



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In the following, we elaborate on how KfW's reformed mandate and adapted governance structure can be supported by a mission-oriented strategy to maximise its transformative impact and meet its societal missions.

Strategy

E3G's analysis of KfW shows that the group is one of the pioneers in climate-friendly banking in individual business areas and product lines.¹⁶ However, KfW sometimes seems to find it difficult to respond to the rapidly evolving political and economic environment. For example, Germany is currently reorientating its energy policy. This makes calculations such as potentially directing up to one third of all energy investments this decade to gas-fired power plants neither politically nor economically or ecologically timely. There is a lack of coherence among the individual business areas in addressing climate issues. This shows that KfW lacks a group-wide strategy for becoming a transformative innovation and investment agency and thus a key building block in implementing Germany's climate policy goals at home and abroad.

A mission-oriented goal should be at the heart of KfW's strategy. Following this approach developed by political economist Mariana Mazzucato, government organisations should spur long-term innovation and investment through a clearly articulated mission focused on an overarching goal that is broken down into specific projects.¹⁷ Mazzucato has referred to KfW in the past, citing its mandate as an example of a mission-oriented government organisation.¹⁸

Accordingly, there is no need to reinvent the wheel in order to adapt KfW's strategy. Rather, the adjusted mandate and the climate policy reality should be an impetus to revise and sharpen the group's strategy. That will put the bank in a position to play its crucial role in the upcoming climate-neutral transition and to seize this as a future-oriented necessity and opportunity. This is also in line with the recommendations of the Sustainable Finance Advisory Council. It calls, among other things, for “KfW to be given a mandate to make its promotional policy compatible with the Paris Climate Agreement, also taking into account

¹⁶ **E3G Public bank climate tracker matrix – KfW**

¹⁷ M Mazzucato, 2018, **Mission-orientated research & innovation in the European Union**

¹⁸ M Mazzucato and CCR Penna, 2016, **The rise of mission-orientated state investment banks: The cases of Germany's KfW and Brazil's BNDES**



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appropriate exclusion criteria. Overall bank management should be aligned accordingly.”¹⁹

Thus, two key tasks or missions of KfW can be derived from the German government's overarching political goal of “climate neutrality by 2045” (see Figure 1).²⁰ The first is to support the *transformation of the real economy* through targeted investment and innovation promotion. On the other hand, as one of the largest international promotional banks and the third-largest German bank, KfW has a special responsibility to proactively *help shape a sustainable financial system* and develop Germany as a location for sustainable finance. In this context, it is important to note that these missions should play a key role in defining both KfW's German business and its international development and export finance business.

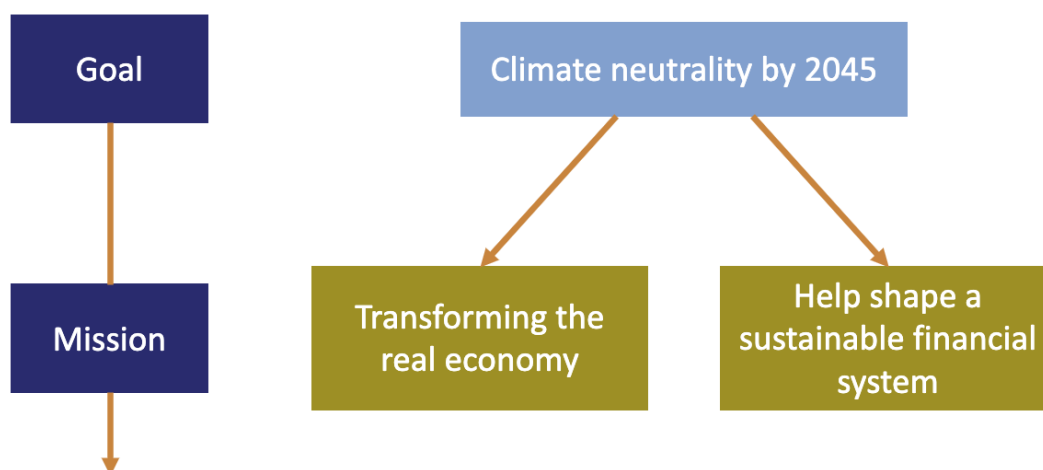


Figure 1: Two key missions for KfW derive from the German government's goal for climate neutrality by 2045.

Mission – Transformation of the real economy

KfW has already demonstrated in the past that it can drive targeted technological innovations and the creation of new markets with its national and international investment programs and project funding. Particularly noteworthy in this regard are KfW's energy efficiency programs,²¹ and its investments in

¹⁹ Sustainable-Finance-Beirat der Bundesregierung, 2021, **Shifting the trillions – Ein nachhaltiges Finanzsystem für die Große Transformation**

²⁰ In order to clarify a temporal dimension, we assume that Germany will be climate neutral by 2045, but this must also be reflected in KfW's development and foreign trade financing.

²¹ KfW, March 2017, **Ten years of the KfW's “Energy-efficient construction and refurbishment” programmes**



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renewable energies well ahead of their market maturity²² in Germany or developing and emerging countries. The goal should now be to systematise this strength of KfW and anchor it in the DNA of the institution. To this end, four sub-missions can be derived from the mission of transforming the real economy. In turn, these can be broken down into different projects. The projects presented are relevant to all sub-missions (see Figure 2).²³

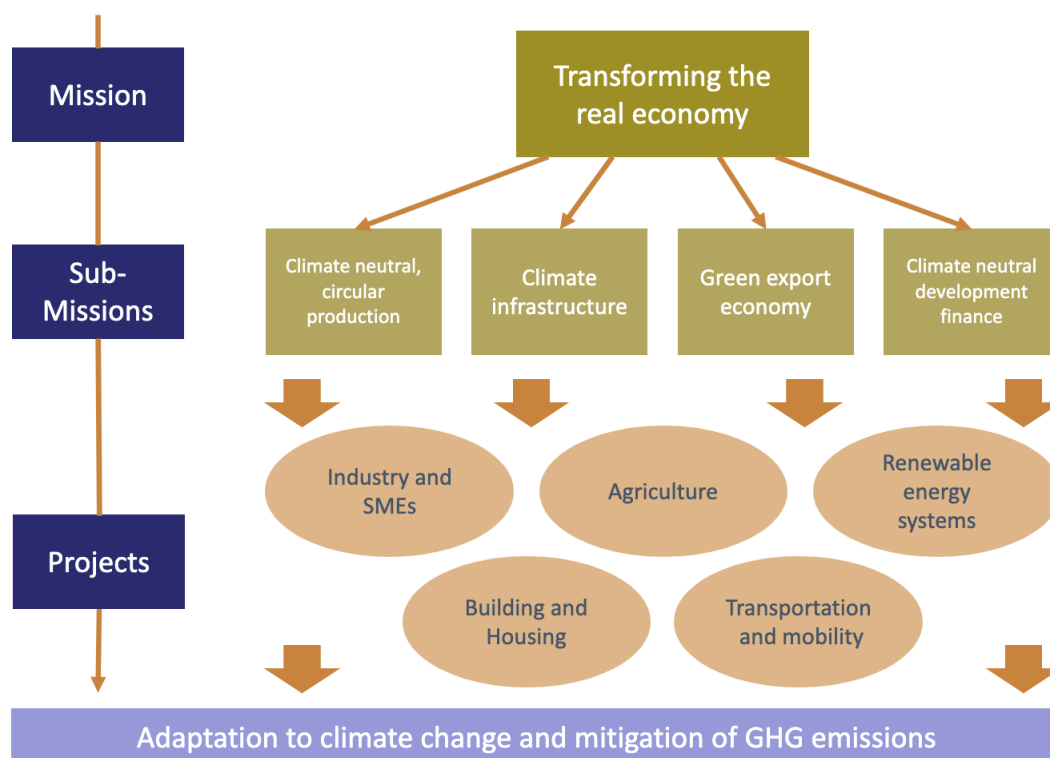


Figure 2: Sub-missions and projects that can be derived from KfW's mission to transform the real economy.

Mission – Help shape a sustainable financial system

By issuing over €45 billion of green bonds, KfW has strengthened Germany as a location for sustainable finance and positioned itself as a leader for other development and private banks.²⁴ It also sets standards with individual programs, such as the Klimaschutzoffensive Mittelstand (SME climate transition programme), which supports German companies in integrating EU taxonomy

²² KfW, [Evaluationen Erneuerbare Energien](#)

²³ The following flowcharts are based on illustrations from M Mazzucatto, 2021, *Mission Economy: A Moonshot Guide to Changing Capitalism*, Harper Business.

²⁴ KfW, 2022, [Invest in the everlasting: Green bonds – made by KfW](#)



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criteria.²⁵ These approaches promote both the transformation of the real economy and the development and co-design of a sustainable financial system. Like the mission described above, the aim here is to systematise these approaches and integrate them into the group-wide business and financing model. The mission of *helping to shape a sustainable financial system* can also be broken down into individual sub-missions whose goals can be realized through specific projects (see Figure 3).

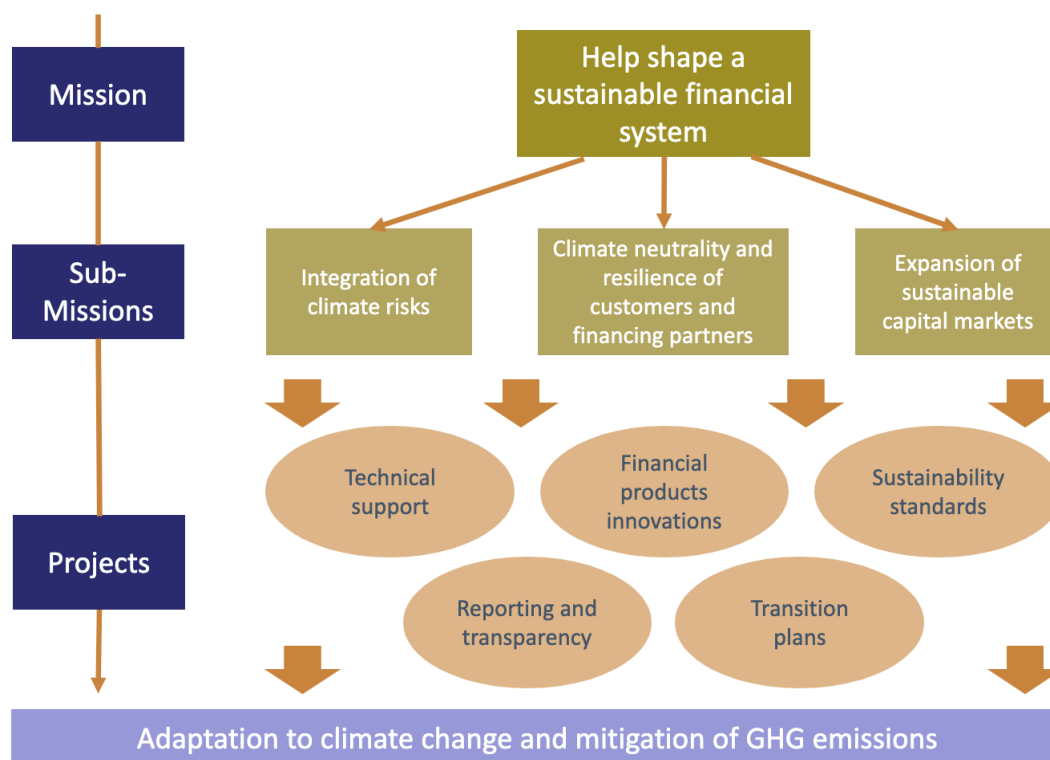


Figure 3: Sub-missions and projects that can be derived from KfW's mission to help shape a sustainable financial system.

KfW can play a crucial role in building a sustainable financial system far beyond its own capacities. To do so, it should consistently extend the applicability of its climate targets to its customers, business partners and the financial markets. In Germany in particular, it can act as a multiplier through its close ties with the private financial sector and promote climate mainstreaming at the level of its customers' banks, such as SMEs or municipal energy suppliers. The instruments developed by the TranSForm project, such as greenhouse gas accounting or internal impact management, must be strengthened and given additional strategic importance by anchoring them in the management's areas of responsibility.

²⁵ KFW – Klimaschutzoffensive



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Case Study – Transition Plans: Green Steel by Salzgitter AG

For government funding to flow effectively and efficiently, KfW must be able to evaluate and continuously measure the transformative potential of funding programmes and financing individual projects in advance. Concepts such as "double materiality" and "additionality" play an important role here.

One effective instrument could be transition plans that show how individual projects or entire companies will achieve climate neutrality by 2045 at the latest. Support programs should make a clear contribution to climate neutrality in the relevant sector. It is important to dynamically adjust the targets so that the funding keeps pace with innovation progress. On KfW's side, this requires the development or expansion of the bank's internal expertise to be able to assess, improve or even co-develop such transition plans with customers.

In February 2022, for example, the Salzgitter AG steel group announced its intention to switch to CO₂-neutral steel production by 2033, bringing forward its original target by twelve years.²⁶ One of the prerequisites for this is among other things, the "clarity in the financial support for the transition." KfW's role could be to identify technological innovations that currently receive no or only difficult-to-access financing on the market and to promote them accordingly.

A long-term partnership in which KfW supports Salzgitter AG with the aim of bringing CO₂-neutral steel production to market maturity would be key. In this way, the dispersion of innovations into the market could also be targeted so that the entire sector profits. Germany could also be strengthened as an innovation hub through targeted export financing.

A smart transition plan, which should underlie the funding, sets concrete milestones that already identify the necessary financing schemes, thus accelerating the transition from public to private financing.

²⁶ Salzgitter AG, February 2022, [Salzgitter presents new "Salzgitter AG 2030" strategy](#)



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The mission-oriented approach in the international context

With its promotional programs, KfW is not only an important player in the transition of German economy and society. Internationally, it is of central importance above all for German development policy, as well as for Germany's role and credibility as a climate policy pioneer and export nation. While the German climate policy objectives strengthen KfW's organisational principle and define the bank's missions, the context of partner countries and organisations in particular must be taken into account in international business. It is important that climate and development goals are considered more in conjunction with each other.

For instance, similarly ambitious milestones can be derived from the International Energy Agency's net zero report for emerging and developing countries.²⁷ IPEX investments (for example, through export credits or project financing) should be based on Germany's climate targets. This is all the more important as they strengthen Germany as a location for climate-neutral exports. The basic principle must be: *Without ignoring the national context, KfW promotes the maximum possible transition in all its business areas and regional cooperation.*

Five principles of action for the innovation and investment agency KfW

The investment available to KfW to implement the missions described in the previous parts is limited. As a result, there is a need to allocate funding with maximum efficiency and effectiveness in mind, so that government funding can have the biggest possible impact. The following five principles, based on Professor Mazzucato's work, are designed to ensure that KfW investments increase project-related impacts and lead to “spillover” effects.²⁸

6. **Pick the willing:** To unleash the transition, KfW must identify and promote those actors who are willing to implement innovative business models or production processes to drive progress towards carbon neutrality.
7. **Risk mitigation:** One of KfW's core tasks must be to make investments in potentially transformative projects that cannot be adequately financed on the private capital market. In this context, it is important to expand KfW's understanding of risk in such a way that the “trial-and-error” nature of innovation and transition processes is reflected by corresponding financial instruments.

²⁷ International Energy Agency, 2021, [Financing clean energy transitions in emerging and developing economies](#)

²⁸ M Mazzucato and G Dibb, 2019, [Missions: a beginner's guide](#)



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8. **Investment and impact maximization:** KfW alone will not be able to finance the transition. Thus, the objective is to leverage KfW funds through co-financing models with the private sector. In doing so, these partnerships must be entered into on an equal footing and with a shared risk/profit understanding. As risk decreases, financing instruments become more passive and indirect. In addition, KfW should work towards aligning the business practices of national and international financing partners with KfW's investment standards to promote the development of climate-neutral capital markets.
9. **Innovation focus and dispersion:** As a government innovation agency, KfW must ensure that its investments promote technologies, manufacturing processes, and financing and business models that accelerate the transition to a climate-neutral future. Technologies that are in “phase-out” should no longer receive any support (such as fossil fuels). Government funding must flow into innovations that have the potential to have an impact beyond the direct beneficiaries, for example because climate-neutral business models can be replicated.
10. **Technical and planning support:** KfW has technical and climate innovation expertise across the entire banking group. This expertise should be systematised and translated into concrete financing paths through the development of transition plans with customers, as well as the development of competencies in clients’ banks.

Figure 4 illustrates how KfW can act as an innovation and investment agency using various financing vehicles.

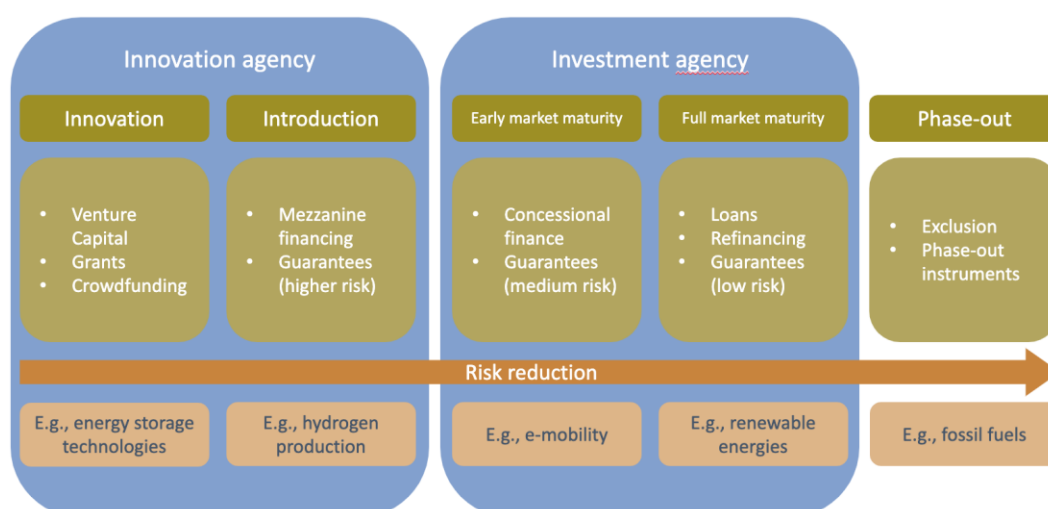


Figure 4: Ways in which KfW can act as an innovation and investment agency.



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Action in 2022

The proposed reform of KfW will take time, in particular adjustment of its mandate, governance structures and strategy. However, the urgent tasks of the German government in its efforts to become less dependent on imported fossil fuels, as holder of the G7 presidency, and in driving forward the economic transition do not allow for any delay. Thus, KfW must launch transformative programs and projects in international and German financing as early as 2022–23. To achieve this, the German government should adopt measures or fund projects to prepare KfW for its new role as an innovation and investment agency. This active, impact-based mandate extension can provide KfW with clear indicators that describe its role in the transition to climate neutrality.

Legislation in the context of Germany's revised energy and climate policy

- > Setting up a support program to drive the transition of SMEs and municipal energy suppliers and promote innovation. The basis for this is formed by transition plans, the standards for which are set by the government. The verification of said plans is the responsibility of the house banks. KfW supports necessary training programs correspondingly.
- > Establishing a “climate-friendly construction and refurbishment” subsidy program. This should take a holistic view of energy efficiency and the heat transition along the value chain and scale subsidies on the basis of reduced energy consumption. The efficiency house standard 40 (Effizienzhausstandard 40) would become the baseline for support.
- > Developing a support program: “100% Renewable Energy System by 2035”, based on the International Energy Agency's net-zero report and resulting milestones for KfW financing. Stop the promotion of fossil fuels, target financing to storage technologies and hydrogen electrolyzers, expand trans-European and inner-German grids, and promote renewable energies in relation to the corresponding market maturity.

International and project finance in the context of the G7 presidency and German development policy

- > KfW Capital and KfW IPEX as well as the KfW Development Bank and German Investment Corporation (DEG) in the development context provide targeted financing for lighthouse projects. Where necessary, these projects are based on detailed transition plans drawn up with KfW experts and aim to drive



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forward the decarbonisation of complex, emissions-intensive sectors and production processes.

- > In the context of the climate and energy partnerships, as well as the German G7 presidency, KfW is financing projects with the aim of leveraging further Paris-compatible investments and promoting climate-neutral technology transfer. Priority is given to KfW Development Bank's role in financing further partnerships with additional funding along the lines of the South Africa Just Energy Transition Partnership.

Concluding remarks

The proposals set out in this paper are intended as suggestions and are meant to paint a picture of how KfW can live up to its important role as a transformative bank in Germany and the world. In doing so, we draw on existing demands from the German government's Sustainable Finance Advisory Council and other civil society organisations. The proposal to transform KfW into a mission-oriented, transition-driving bank is based primarily on the political economy work of Marianna Mazzucato.²⁹ We adapted and further developed these ideas to KfW's context using E3G's expertise on the design of green promotional banks. Our reform proposals are to invite discussion in an effort to shape the innovation and investment agency KfW envisaged by the new federal government.

²⁹ M Mazzucatto, 2021, **Mission Economy: A Moonshot Guide to Changing Capitalism**
