

## Summary

# Making Long-Term Low GHG Emissions Development Strategies a Reality

A guidance to policy makers on how to develop an LTS for submission in 2020 and future revision cycles

May 2020

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On behalf of:



of the Federal Republic of Germany

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# Structure

## The guidance introduces three key concepts for consideration

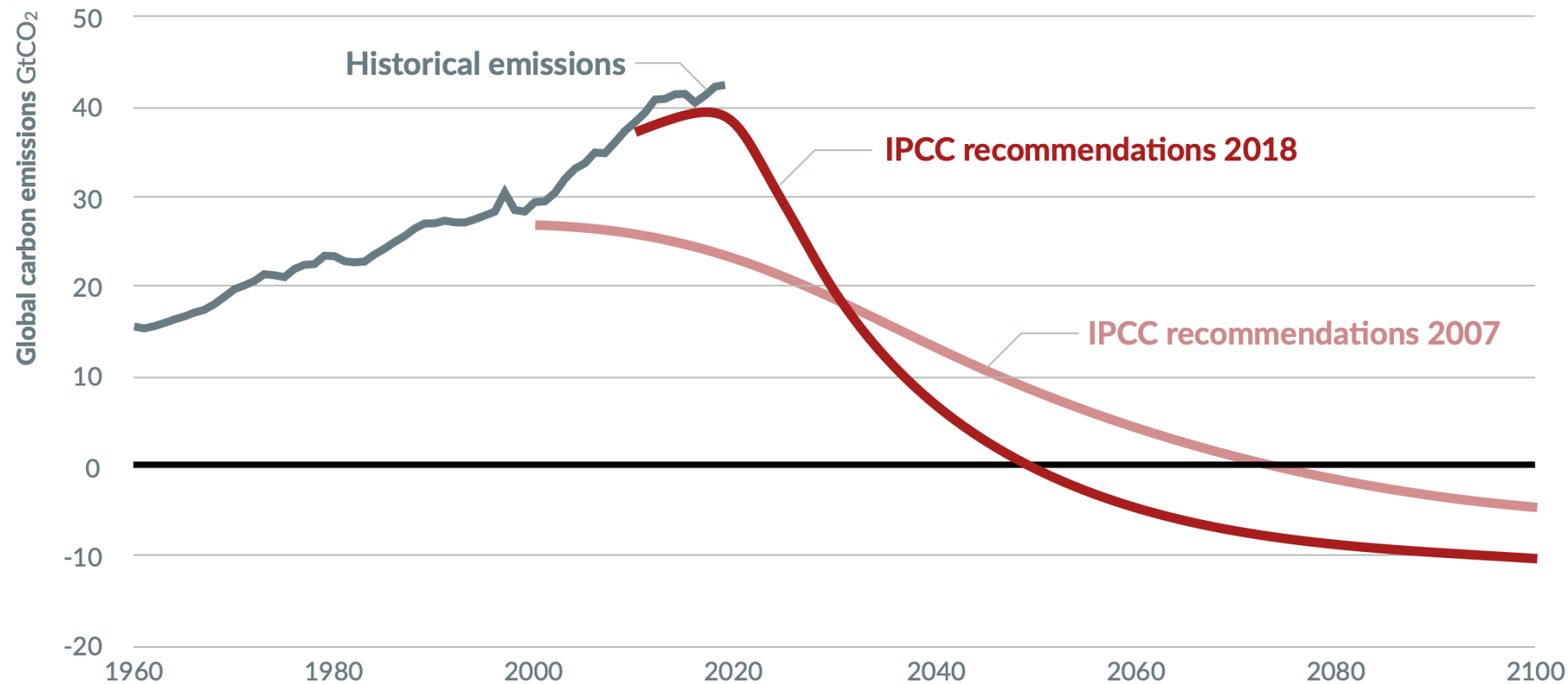
1. The case for ongoing revisions of LTSs beyond 2020
2. Factoring in country specific circumstances and starting points
3. Eight key aspects of LTSs for consideration

# The case for ongoing revisions of LTSs beyond 2020

Harmonised revision cycles of LTSs and NDCs can improve the alignment of a country's long-term vision and medium-term targets and make sure that strategies are grounded in the latest science.

# The Paris Agreement's temperature limit and science's call for action

The latest scientific evidence on long-term pathways unambiguously demonstrates the need to initiate a transition toward a decarbonised economy as fast as possible to limit global warming to 1.5°C above pre-industrial levels.



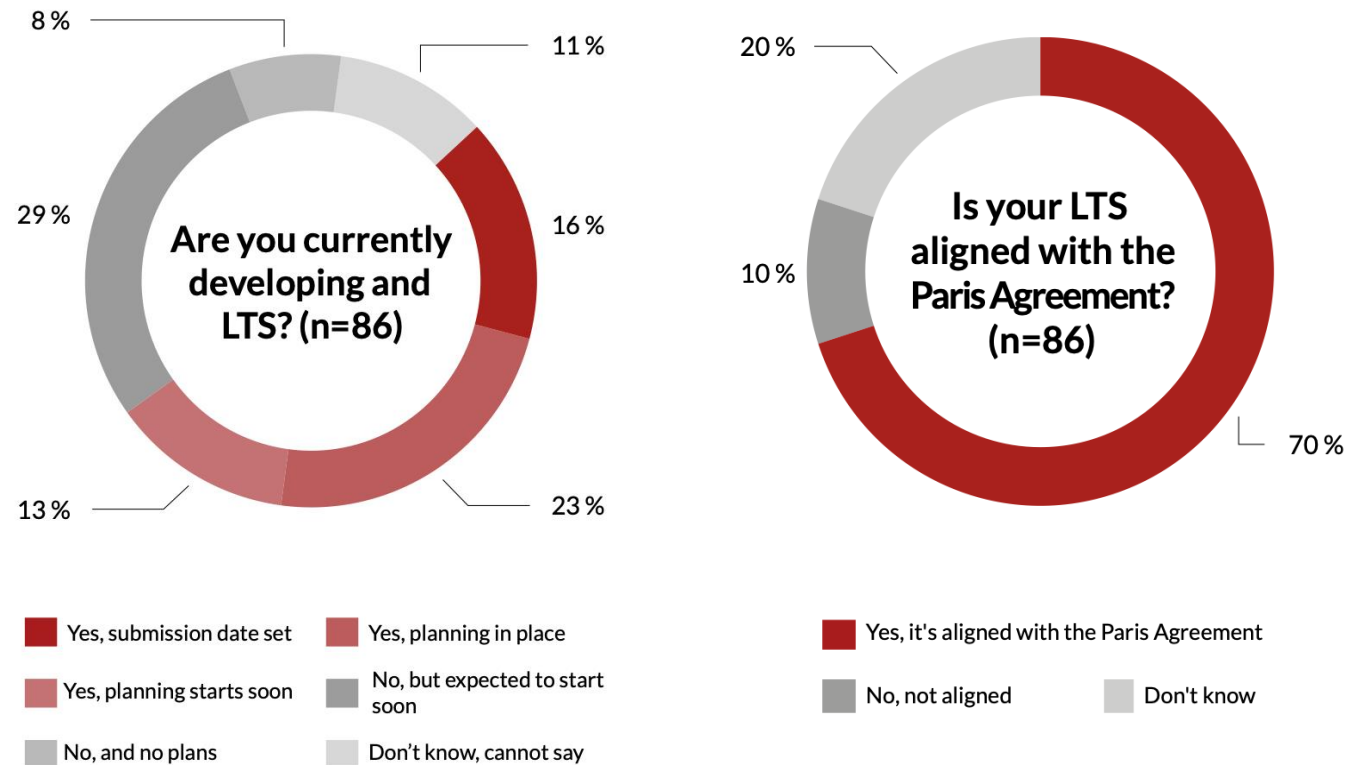
*Context: Pathways of global CO<sub>2</sub> emissions recommended by the IPCC in the Fourth Assessment Report of 2007 (445 to 490 ppmCO<sub>2</sub>eq leading to 2-2.4°C) and by the IPCC special report on 1.5°C in 2018 for low- and no-overshoot scenarios leading to 1.5°C increase (only the average of the ranges are shown).*

# A responsibility under the Paris Agreement

- Article §4 of the Paris Agreement calls on Parties “to formulate and communicate long-term low greenhouse gas emission development strategies” (LTSs), mindful of the temperature goals, and submit these to the UNFCCC.
- The Paris Agreement’s articles and the Katowice Rulebook provide only vague guidelines on LTS development, and no guidelines regarding the role of LTSs and responsibilities for updates in the future.

# The status quo of LTS development

Out of 86 respondents for governments worldwide in November 2019, the latest available survey in the NDC Update Report found that **52% of respondents' countries are in the process of developing an LTS or starting soon.**



Source: NDC Update Report of November 2019 on LTS development and Paris Agreement alignment (Roeser et al., 2019)

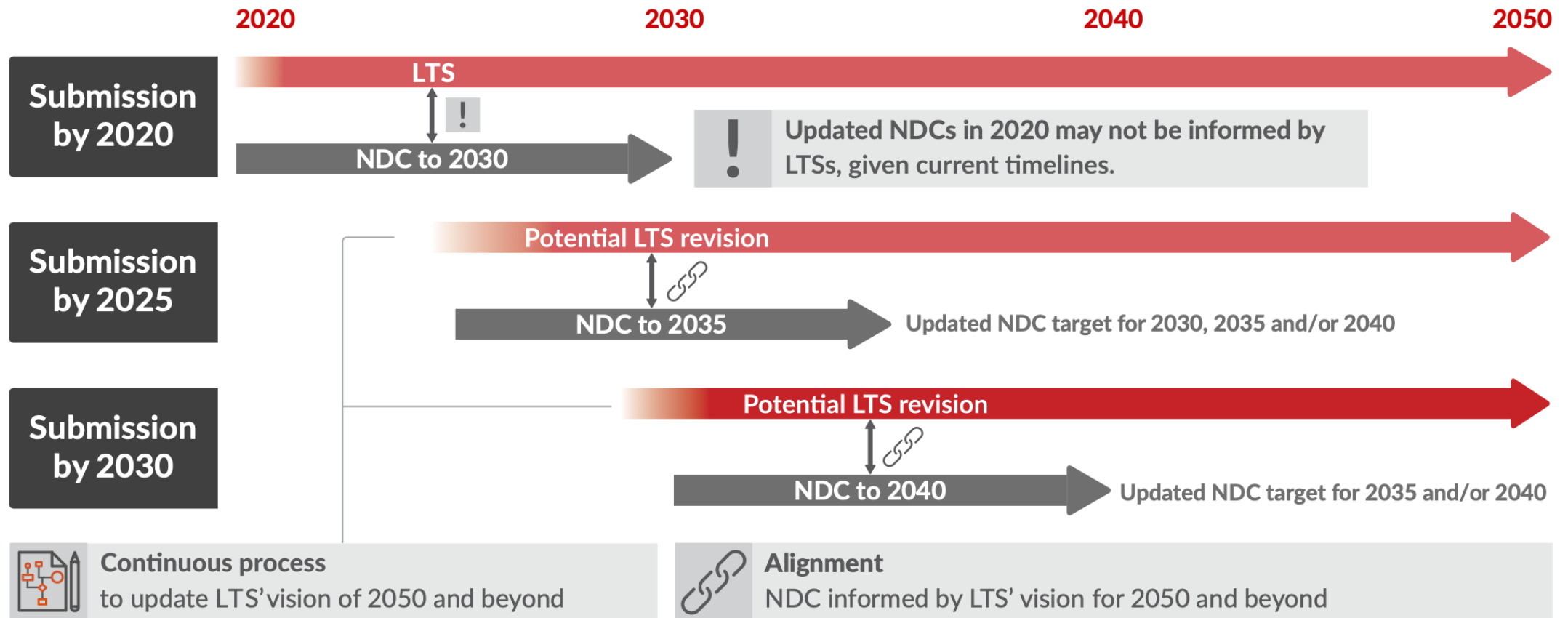
# Aligning future NDCs and LTSs through iterative revision cycles

- The five-year revision cycles for Parties to submit their NDCs to the UNFCCC provide an opportunity to improve the alignment of countries' long-term visions (LTSs) with their medium-term targets (NDCs).



- Future LTS revisions allow policy makers to keep a country's long-term planning up to date informed by the latest science and developments.
- The LTS submission can be a concise, strategic document, well aligned with other processes and strategies to avoid duplication.

# A proposal for harmonised revision cycles of NDCs and LTSs





# Key benefits for policy makers

1. Increased political consensus on the long- term direction makes it **easier to plan in the short and medium term.**
2. Providing the private sector with a clear long- term signal can **improve conditions for private sector investment** in line with the Paris Agreement's temperature limit.
3. International climate finance **might flow more easily** to a country with a clear long-term pathway and a pipeline of projects proven to be aligned with this national strategy.
4. Future climate planning for NDC revisions or sectoral climate action plans **become more streamlined and efficient processes** if occurring as part of an iterative process alongside an LTS.

# LTS development in country-specific contexts

The approach for LTS development presented in the following sections aims to inform policy makers on how to develop and revise a country's LTS in a gradual iterative process acknowledging the countries' different starting points.

# A concept to enhance LTS development over time (1/2)

The concept of three levels of comprehensiveness aims to acknowledge and account for the different starting points of countries to develop their LTS in 2020.

## Three levels of comprehensiveness for LTS development



### **Base Version**

Starting point for LTS development where limited resources are available

### **Intermediate Version**

Elaborated version of LTS with indication of existing knowledge gaps on thematic areas that require further support/work for next review cycle

### **Detailed Version**

Comprehensive version of LTS based on in-depth underlying analysis

# A concept to enhance LTS development over time (2/2)

## Three levels of comprehensiveness for LTS development



**1**  
Base Version

**2**  
Intermediate Version

**3**  
Detailed Version

**Technical and financial resources** available to governmental agencies and researchers for in-depth thematic analyses and scenario modelling



**Human resources** available within governmental agencies for political coordination and stakeholder consultations



**Political mandate and leadership** to reach consensus for long-term vision



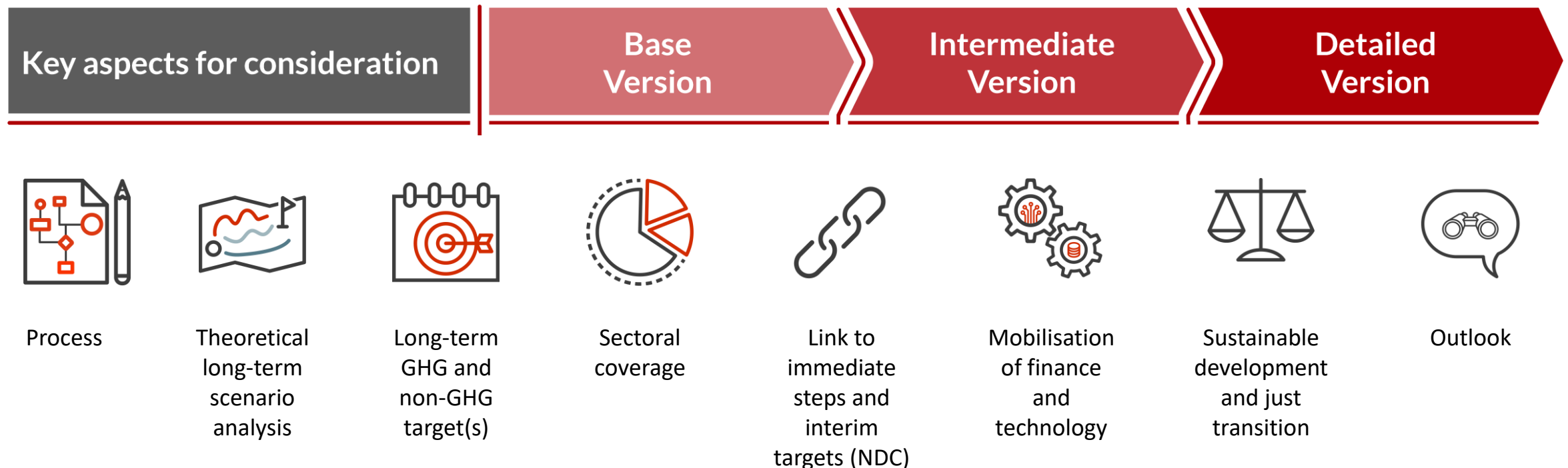
Country-specific circumstances

# Eight key LTS aspects for consideration









A differentiated approach on how policy makers can consider key aspects for LTS development accounting for their country's circumstances.

# Introducing eight key LTS aspects for consideration

The concept of three levels of comprehensiveness can guide policy makers to address each aspect considering their country's circumstances.



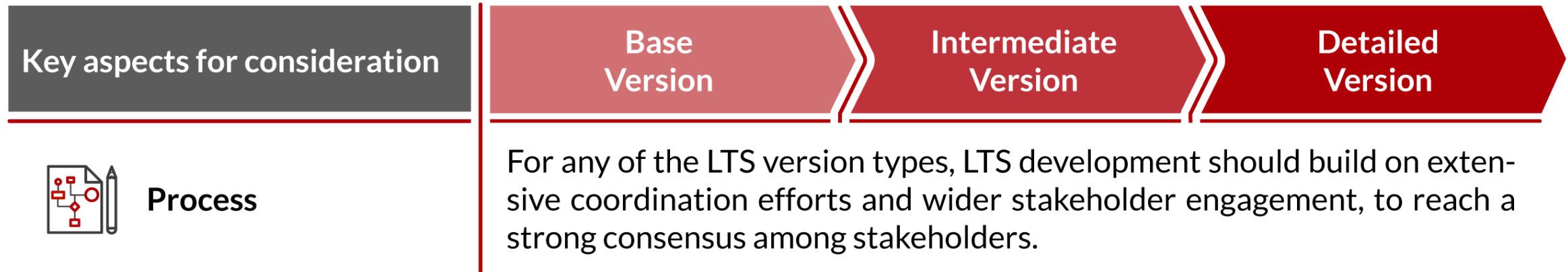
# Key aspects for consideration in an ongoing LTS development process

Key aspects for consideration	Base Version	Intermediate Version	Detailed Version
 <b>Process</b>	For any of the LTS version types, LTS development should build on extensive coordination efforts and wider stakeholder engagement, to reach a strong consensus among stakeholders.		
 <b>Theoretical long-term scenario analysis</b>	Acknowledgement of scientific findings	First estimates of Paris Agreement aligned scenarios	Country-specific Paris Agreement aligned scenarios
 <b>Long-term GHG and non-GHG target(s)</b>	Statement of intention to fully decarbonise	Indicative targets, but not enshrined in national policy	Targets enshrined in national policy
 <b>Sectoral coverage</b>	Focus sectors	Focus sectors with other sectors in lesser detail	All sectors in detail
 <b>Link to immediate steps and interim targets (NDC)</b>	Reflection on enhanced alignment of medium-term targets (NDCs) and short-term actions with the country's long-term vision —————→		
 <b>Mobilisation of finance and technology</b>	Reflection of improved understanding on mobilisation of domestic and international finance and technology resources over time —————→		
 <b>Sustainable development and just transition</b>	Reflection on improved mainstreaming of sustainable development and just transition considerations —————→		
 <b>Outlook</b>	Transparent communication of intention to further develop LTS over time and additional international support needs required —————→		

**Summary overview**  
of all key aspects for  
consideration per levels  
of comprehensiveness

# Introducing eight key LTS aspects for consideration

## Process – Overview





# Introducing eight key LTS aspects for consideration

## Process – Detailed overview



### Process

Base  
Version

**For any of the LTS version types, LTS development should build on extensive coordination efforts and wider stakeholder engagement to reach a strong consensus among stakeholders.**

Intermediate  
Version

- ✓ The **establishment of robust planning processes** serves as the backbone of any inclusive LTS development.
- ✓ **Extensive coordination and stakeholder engagement** for broad consensus among private and public stakeholders increasing chances of successful implementation
- ✓ **Sufficient (financial and human) resources** and **robust political mandate** necessary for responsible government institutions to steer the coordination process

Detailed  
Version

# Introducing eight key LTS aspects for consideration

## Process – Country example



### Process

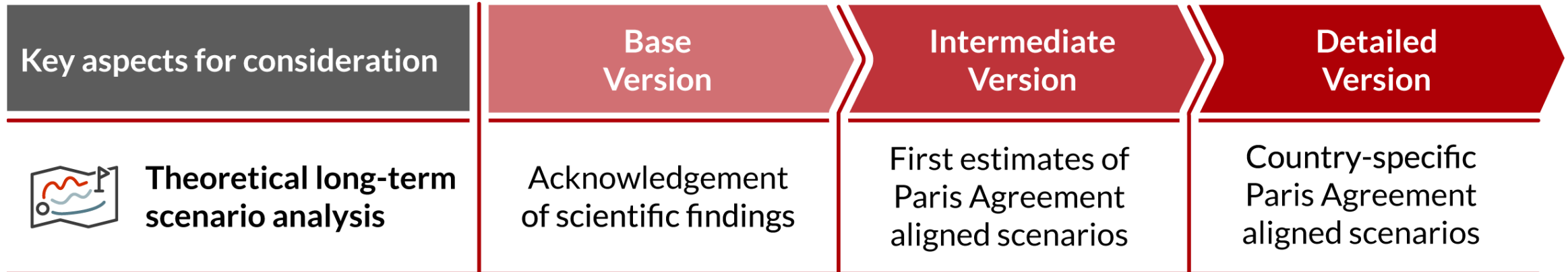
Real-world  
Example

#### Example for 'intermediate version' - Germany's LTS

- Climate Action Alliance informs Germany's LTS development process, triggering the participation of and dialogue between federal states (*Länder*), local authorities, associations and members of the public to agree on 100 measures to inform the German LTS.
- Climate Action Alliance will also be involved in the implementation and revision of the programmes identified in the LTS.
- In a detailed LTS version, this process could be coupled with a governance framework for inter-ministry coordination, for example to strengthen sector-coupling and facilitate dialogue and interactions between German ministries.

# Introducing eight key LTS aspects for consideration

## Theoretical long-term scenario analysis – Overview



# Introducing eight key LTS aspects for consideration

## Theoretical long-term scenario analysis – Detailed overview



### Theoretical long-term scenario analysis

#### Base Version

#### Acknowledgement of scientific findings

- ✓ **Review** of available (country-specific) literature and findings by the IPCC as starting point
- ✓ **Acknowledgment of scientific findings** (e.g. need of net-zero CO2 emissions by 2050) for country's long-term modelling with identification of currently existing knowledge gaps
- ✓ **Consultative process** by researchers and policy makers to determine next steps and support needs

#### Intermediate Version

#### First estimate of Paris Agreement aligned scenarios

- ✓ **Initial (country-specific) economy-wide aligned scenarios** developed with some focus sectors covered in more detail
- ✓ Remaining uncertainty of obtained results due to the need for modelling improvements (e.g. missing data inputs, limited peer-review, etc.) **might make results highly indicative**
- ✓ **Consultative process** by researchers and policy makers to develop scenarios

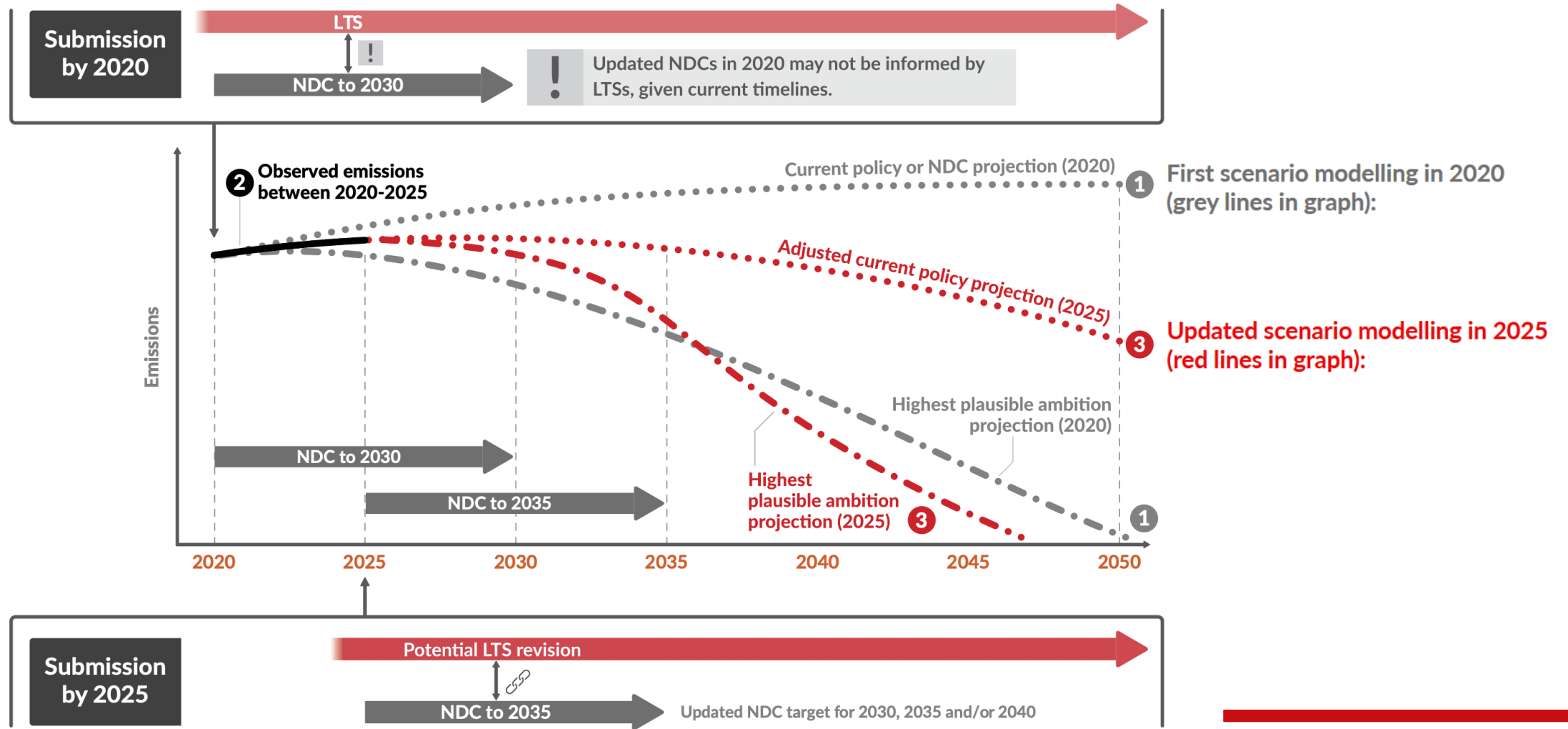
#### Detailed Version

#### Country-specific Paris Agreement aligned scenarios

- ✓ **Country-specific aligned scenarios** developed for all sectors and economy-wide scenarios
- ✓ Robust methodologies and models applied and in-depth (peer) review
- ✓ **Cooperative process** by researchers and policy makers to co-develop scenarios and to validate key inputs, assumptions and results

# Updating the long-term scenario analyses over time

Concept introduced in Annex of guidance document



# Introducing eight key LTS aspects for consideration

## Theoretical long-term scenario analysis – Country example



### Theoretical long-term scenario analysis

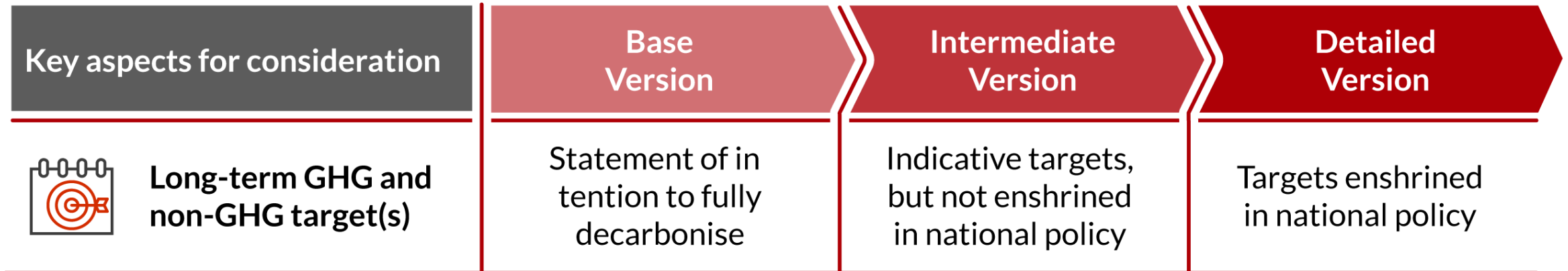
Real-world  
Example

#### Example for 'detailed version' - Portugal's LTS

- Portugal's LTS **acknowledges the latest science** and references the Paris Agreement temperature limit and the IPCC Special Report on 1.5°C, which both frame the need for full decarbonisation by 2050.
- The economy-wide scenarios behind the LTS were **developed in iterative phases**, gathering contributions from and peer-reviewing of various national institutions and experts, for instance through technical workshops on assumptions and trends.
- The process resulted in **three comprehensive scenarios encompassing all sectors**, tailored to country-specific circumstances and based on robust methodologies and models.
- A draft of the LTS underwent a **three months consultation process** to engage stakeholders in a series of events and gather feedback.

# Introducing eight key LTS aspects for consideration

## Long-term GHG and non-GHG target(s) – Overview



# Introducing eight key LTS aspects for consideration

## Long-term GHG and non-GHG target(s) – Detailed overview



### Long-term GHG and non-GHG target(s)

#### Base Version

#### Statement of intention to fully decarbonise

- ✓ **Inclusion of currently existing long-term targets** (both enshrined in legislation and not)
- ✓ **Opportunity for countries to include additional intentional targets**, for example by acknowledging a country's general intention to achieve net-zero CO<sub>2</sub> emissions by 2050 and net-zero GHG emissions by 2070
- ✓ **Option** to transparently explain a country's intention to formalise (non-)GHG targets going forward

#### Intermediate Version

#### Indicative targets, but not enshrined in national policy

- ✓ **Identification of targets** that support the transition to a decarbonised economy but have not been included in legally binding national policy, ideally including an economy-wide GHG emissions target informed by scenario modelling
- ✓ Such indicative and non-binding targets provide a **clear indication on the country's long-term vision**, even if countries do not want to commit to such targets in a legally binding way

#### Detailed Version

#### Targets enshrined in national policy

- ✓ **Identification of targets** that are or will be enshrined in national policy, ideally including a legally binding economy-wide GHG emissions target supported by sector-level GHG emission targets
- ✓ **Non-GHG targets** can further supplement these national-level and sector-level GHG emission targets (e.g. coal phase-out date)



# Introducing eight key LTS aspects for consideration

## Long-term GHG and non-GHG target(s) – Country example



### Long-term GHG and non-GHG target(s)

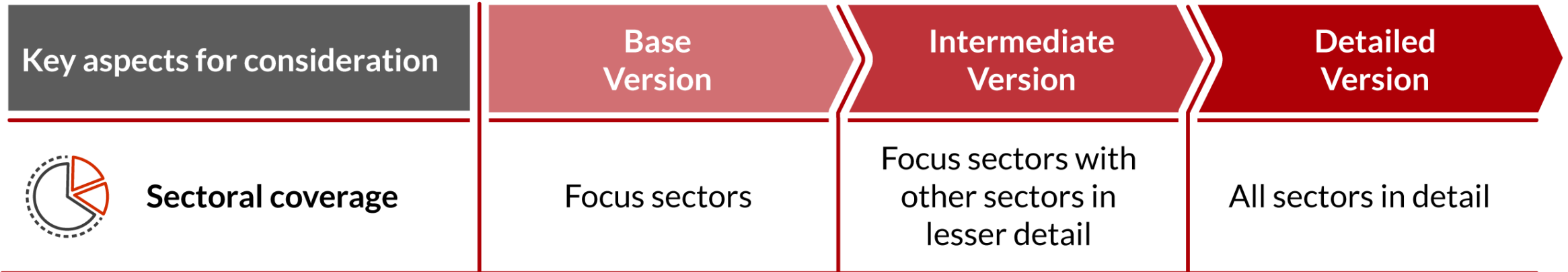
Real-world  
Example

#### Example for 'detailed version' - UK's LTS

- The UK's LTS is **based on existing legislation** such as the Climate Change Act (2008), which commits the UK government by law to reduce greenhouse gas emissions.
- In parallel to the LTS, the 80% reduction target by 2050 was amended in June 2019 to “at least 100% of 1990 levels (net zero) by 2050”.
- The Act includes the **setting of sectoral carbon budgets** to be revised by the Secretary of State every four years. It is noteworthy to mention that while the long-term mitigation target was amended, the carbon budgets are still based on the previous target of an 80% reduction.
- The Act led to non-GHG targets, most notably UK's **coal phase-out** by October 2024.

# Introducing eight key LTS aspects for consideration

## Sectoral Coverage – Overview



# Introducing eight key LTS aspects for consideration

## Sectoral Coverage – Detailed overview



### Sectoral Coverage

#### Base Version

##### Focus sectors

- ✓ **Focus sectors** are covered and existing knowledge gaps for further improvements are identified
- ✓ **Other sectors can be covered to the degree possible**, for example based on limited already existing analysis

#### Intermediate Version

##### Focus sectors with other sectors in lesser detail

- ✓ **Focus sectors are covered in detail**
- ✓ **Other sectors are covered in lesser detail**, for example as more detailed (underlying) analysis might not be available given existing knowledge gaps or lack of available resources at time of an LTS development

#### Detailed Version

##### All sectors in detail

- ✓ **All sectors of the economy are covered in detail**, including international aviation and maritime shipping
- ✓ If considered useful, countries can **additionally emphasise certain sub-sectors** that are particularly relevant in each country's context

# Introducing eight key LTS aspects for consideration

## Sectoral Coverage – Country example



### Sectoral Coverage

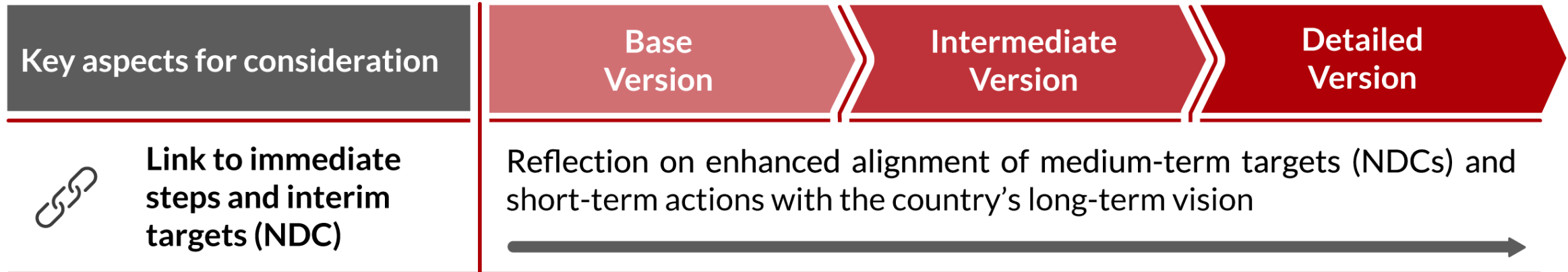
Real-world  
Example

#### Example for ‘base version’ - Marshall Islands’ LTS

- Marshall Islands’ LTS breaks national emissions **down to four focus sectors**: electricity; transportation (land and sea); waste; and cooking & lighting.
- The LTS emphasises the **need for further assessment**, e.g. through surveys, to better understand emissions sources.
- The LTS leaves out international transportation and explicitly aims to better understand the housing sector, beyond emissions from cooking and lighting.
- Most of the LTSs submitted to the UNFCCC by May 2020 include all sectors (generally split as the energy supply sector, transport, buildings, agriculture, land use and forestry, industry and waste sectors)

# Introducing eight key LTS aspects for consideration

## Links to immediate steps and interim targets (NDC) – Overview



# Introducing eight key LTS aspects for consideration

## Links to immediate steps and interim targets (NDC) – Detailed overview



### Links to immediate steps and interim targets (NDC)

Base  
Version

**Reflection on enhanced alignment of medium-term targets (NDCs) and short-term actions with the country's long-term vision**

- ✓ Using LTS to inform medium-term targets in the NDC and immediate action presents an opportunity to **better align short-, medium- and long-term planning**
- ✓ Policy makers can apply a **back-casting approach to inform the target setting for 2030** in line with pathways to full decarbonisation by 2050 or shortly thereafter
- ✓ Countries can start to inform medium-term targets for some focus sectors of particular relevance in country-specific contexts in the beginning
- ✓ Policy makers can also opt to **transparently state their intention** to better align the LTS with medium-term targets in NDC and short-term steps in future revisions

Intermediate  
Version

Detailed  
Version

# Introducing eight key LTS aspects for consideration

## Links to immediate steps and interim targets (NDC) – Country example



### Links to immediate steps and interim targets (NDC)

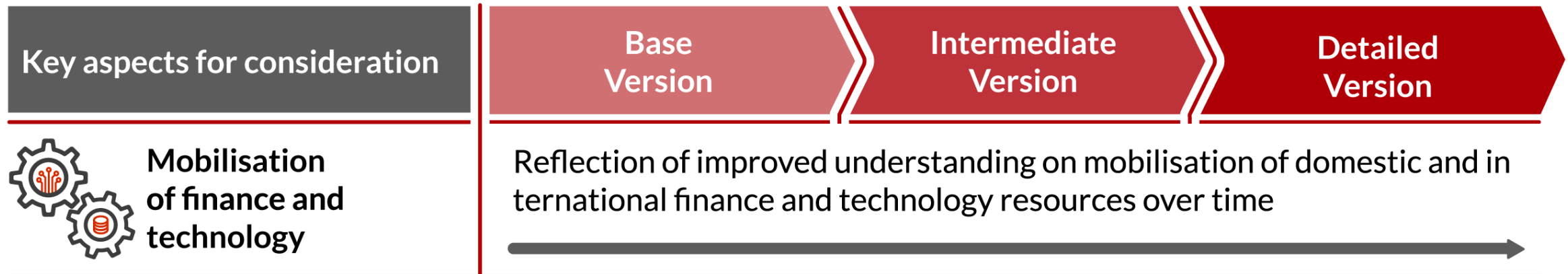
Real-world  
Example

#### Example for 'detailed version' - Fiji's LTS

- Fiji's LTS is seen as a “a key tool, a guiding light, and a fundamental pillar” to **inform, enhance and raise ambition of future NDCs**.
- The LTS provides **emission targets in five-year intervals** between 2020 and 2050 in all scenarios developed in the LTS process.
- A key pillar of Fiji's LTS is to reflect on immediate, short-, medium- and long-term priority actions informed by long-term pathway scenarios.
- The LTS sets “**both economy-wide and sector-specific development targets**” linked to Fiji's NDC, which spans from 2017 to 2036 (see Table 2 of the LTS).

# Introducing eight key LTS aspects for consideration

## Mobilisation of finance and technology - Overview





# Introducing eight key LTS aspects for consideration

## Mobilisation of finance and technology – Detailed overview



### Mobilisation of finance and technology

Base  
Version

**Reflection of improved understanding on mobilisation of domestic and international finance and technology resources over time**

- ✓ Opportunity to **transparently communicate** how much international financing and other (technological) support a country requires in addition to the contribution of domestic resources
- ✓ Aspects related to finance and technology covered in an LTS can reflect the **current state of knowledge on key fields of actions** to address barriers to accelerated sector transitions in a country-specific context
- ✓ **Regularly updated analyses** might enable policy makers to better communicate a support needs beyond domestic capabilities to the international community
- ✓ Policy makers can opt to **closely interlink the theoretical long-term scenario analysis with assessments on finance and technology** required for pathways of accelerate mitigation ambition

Intermediate  
Version

Detailed  
Version

# Introducing eight key LTS aspects for consideration

## Mobilisation of finance and technology – Country example



### Mobilisation of finance and technology

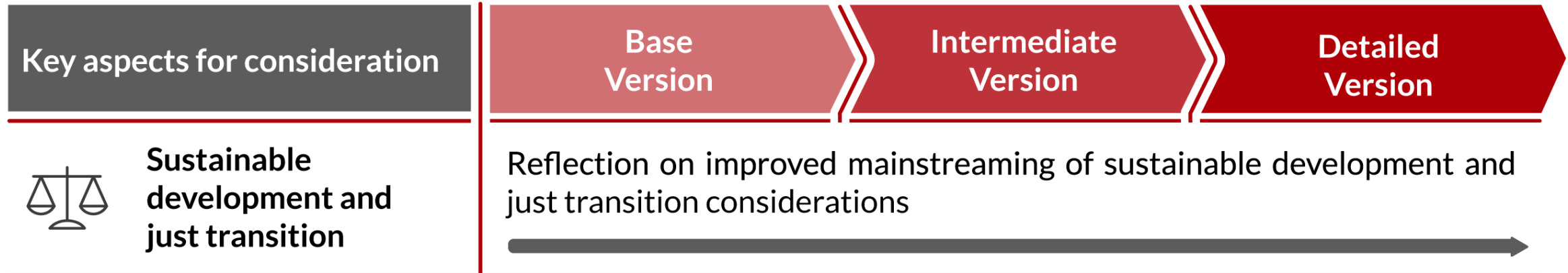
Real-world  
Example

#### Example for 'detailed version' - Costa Rica' LTS

- Costa Rica' LTS includes seven cross-sector strategies, of which **two strategies aim to mobilise and allocate funds** in support of the country's decarbonisation pathway.
- Strategy B aims to **elaborate and implement a domestic "Green Tax Reform"** to be led by the Ministry of Finance to mobilise new revenue sources for the transport sector transition (including elimination of fossil fuel subsidies).
- Strategy C, to be led by several Ministries such as the Ministry of Foreign Affairs and the Ministry of Foreign Trade of Costa Rica, will focus on **mobilising national and international funds** from both public and private sources.
- In a first step, Costa Rica agreed on a USD 230 million loan with the Inter-American Development Bank to implement NDC and LTS policies that support the country's sustainable development strategy (IDB, 2020).

# Introducing eight key LTS aspects for consideration

## Sustainable development and just transition – Overview



# Introducing eight key LTS aspects for consideration

## Sustainable development and just transition – Detailed overview



### Sustainable development and just transition

Base  
Version

#### Reflection of improved mainstreaming of sustainable development agenda and just transition considerations

- ✓ LTSs can reflect on the mainstreaming of a country's sustainable development agenda into their long-term vision for decarbonisation and related just transition strategies for affected communities.
- ✓ As for the *sustainable development agenda*, policy makers can elaborate on **key considerations to ensure and enhance the alignment of SDGs** with a country's long term vision and methods/processes to track and evaluate progress towards SDGs
- ✓ As for *just transition strategies*, policy makers can transparently outline **key considerations for (1) targeted interventions, (2) anticipated labour market policies and social protection measures, and (3) required platforms for social dialogue** (e.g. a multi-stakeholder commission for managing a coal phase-out)

Intermediate  
Version

Detailed  
Version

# Introducing eight key LTS aspects for consideration

## Sustainable development and just transition – Country example



### Sustainable development and just transition

Real-world  
Example

#### Example for 'intermediate version' - Costa Rica's LTS

- Costa Rica's LTS includes seven cross sector strategies. Strategy E, to be led by the Ministry of Labour, specifically addresses **labour strategies to support a "just transition"**.
- The LTS acknowledges that the decarbonisation of the economy will impact economic sectors and the labour markets associated with them and highlights the need of processes to adapt to the opportunities and challenges accompanying the transition.
- Strategy E starts with a scoping exercise to **identify international best practices of just transition** processes applicable to Costa Rica. It further aims to **elaborate a funding strategy** to support intervention and communication strategies in those sectors most affected.

# Introducing eight key LTS aspects for consideration

## Outlook – Overview



# Introducing eight key LTS aspects for consideration

## Outlook – Detailed overview



### Outlook

Base  
Version

**Transparent communication of intention to further develop LTS over time and of additional international support needs required**

- ✓ Policy makers can transparently communicate a country's **intention to further develop and update a country's LTS going forward**, for example in five-year intervals ahead of NDC revisions.
- ✓ Such communication can even **emphasis focus areas for further improvements** in a next revisions cycle.
- ✓ Countries facing limitations in technical and financial resources for analyses additionally have the option to **specify international support needs for future revisions** beyond domestic capabilities

Intermediate  
Version

Detailed  
Version

# Introducing eight key LTS aspects for consideration

## Outlook – Country example



### Outlook

Real-world  
Example

#### Ukraine, the Republic of Marshall Islands, France and Czech Republic's LTS

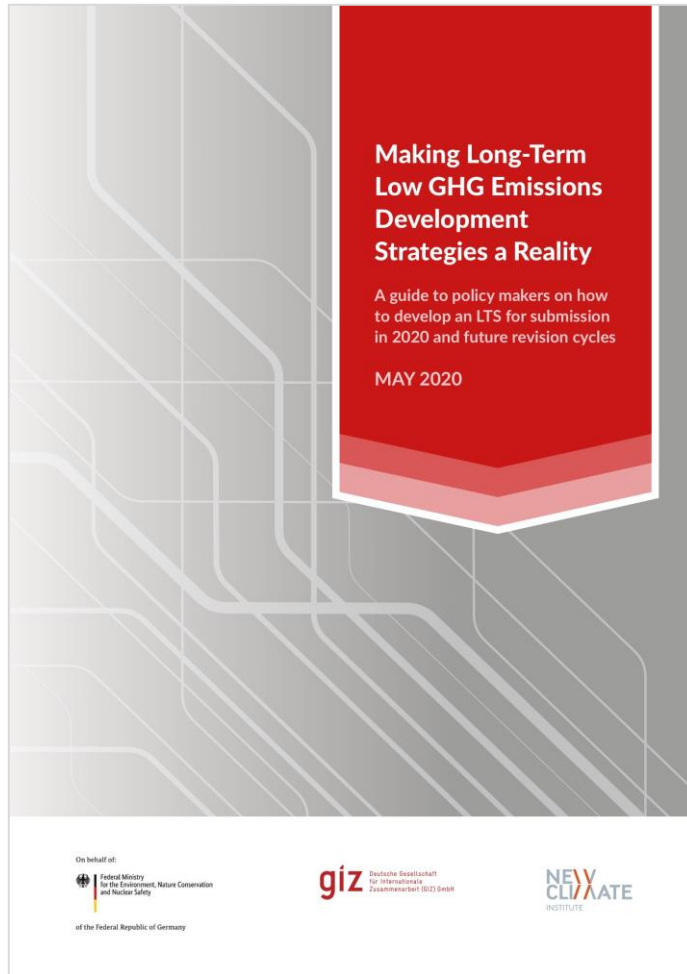
- The LTSs of Ukraine, the Republic of Marshall Islands and France all include statements of intentions to **review and revise their LTSs at least every five years**.
- The proposed frequency of updates in **five-year intervals corresponds to the NDC revision cycles** mandated by the Paris Agreement.
- The Czech Republic's LTS explicitly aims to (re-)evaluate its long-term vision by the end of 2021 to publish a revised LTS by the end of 2023.



# Supporting the development of future LTS revisions

- The international community could set **clearer guidance** on the revision cycles for LTS, beyond a first submission in 2020.
- An **online platform** could track and share experiences on the approaches that countries use to address the various components of their LTSs.
- Further research and dialogues among policy makers should collect **experiences and lessons learnt from this first round** of LTS development.

# Find out more about the guidance



Read the **guidance** at [newclimate.org/publications/](https://newclimate.org/publications/)

Further information in **NewClimate LTS Hub** [newclimate.org/lts-hub/](https://newclimate.org/lts-hub/)

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