

BMUB IKI PROJECT

# Enhancing Climate Services for Infrastructure Investments (CSI)

GLOBAL FORUM 2017

FORUM DOCUMENTATION





## One week in September...

Climate Change is a challenge for the functioning of our infrastructure. Transportation infrastructure such as roads and bridges, ports and railroads are as much at risk as critical energy or coastal protection infrastructure. From urban utility networks and public buildings in rural and remote areas to private residential areas, the consequences of climate change are already visible and will lead to increasing damage, loss and higher costs for future generations. A fundamental means to reduce the future burden are climatological information to better project future climate conditions, such as sea level rise and extreme weather events. Although climate information has become more accessible, the focus on application for decision making is a new field which requires the involvement of diverse stakeholders and development of new cooperation modes.

The topic has also gained international recognition in line with the question how to implement the Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs). Hence, the project "Enhancing Climate Services for Infrastructure Investments (CSI)" has been created as part of the International Climate Initiative of the German Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety (BMUB) to facilitate the cooperation between countries to develop and test approaches towards improving climate services to support climate resilient infrastructures. Therefore, global dialogues represent an important mechanism of the project to facilitate cross-country exchange and discussion on these challenges.

Between September 11<sup>th</sup> and 15<sup>th</sup> 2017, members and partners of the CSI Project came together for the first Global Forum in Germany.

The focus of the first Global Forum was to provide an opportunity for international exchange, and to develop a common understanding of expected outcomes of the project. Moreover, a great part was dedicated to debate about the conceptual fundamentals of climate services, methods for climate risk assessment of infrastructure and to learn from experiences in Germany.

This documentation summarizes the Forum's discussion and its main messages. The images produced are the result of the real-time graphical recording of all sessions of the forum and shall guide this documentation in form of a commented illustrative style.

Thanks to all participants for making the Forum a successful event.

Your CSI Team in Germany





# OVERVIEW



## DAY 1

The focus of day 1 was to share expectations and country specific knowledge as well as to develop a common understanding of what the objectives of the project are. A cross-country analysis of climate service challenges was a highlight.



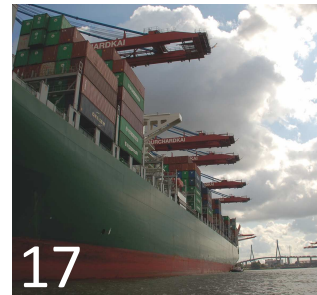
## DAY 2

Day 2 put an emphasis on experiences from the Global Framework for climate services (GFCS) presented by the partner DWD and the methodology for climate risk assessment facilitated by our partner Engineers Canada.



## DAY 3

Hamburg, the laboratory for the Global Forum. Here, intensive dialogue with local city government representatives and climate information value-adding-providers was held to learn from their experiences with the technical, institutional and service related challenges of climate services in Hamburg.



## DAY 4

The port of Hamburg, an important infrastructure for globalized Germany, was the focus of day 4. Its vulnerability to sea level rise and its current mechanisms to address these challenges were highlighted and debated. An onsite visit helped to understand the dimension of climate change challenges for the port and the surrounding city environment.



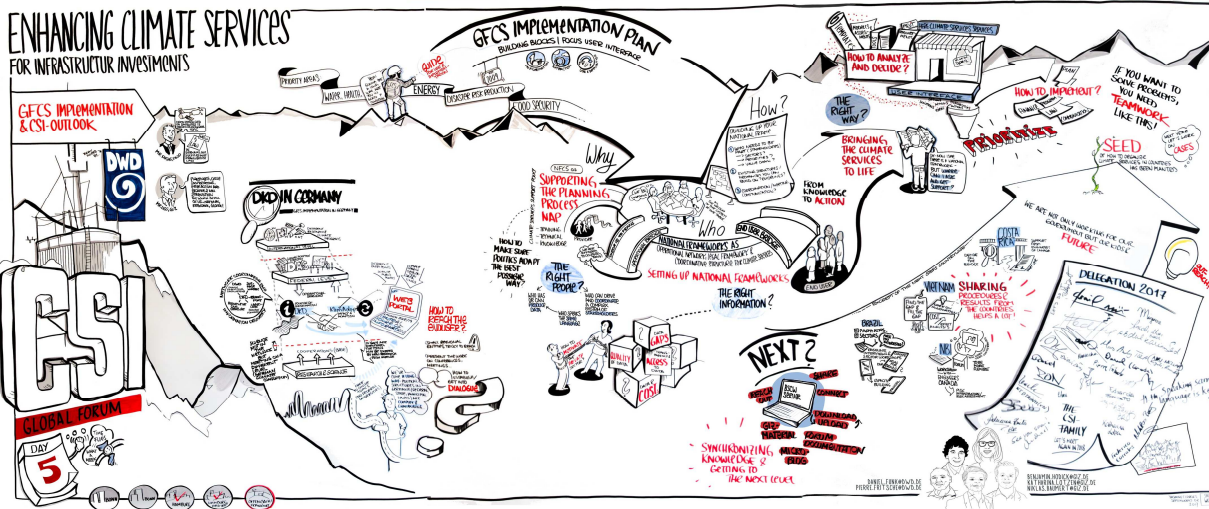
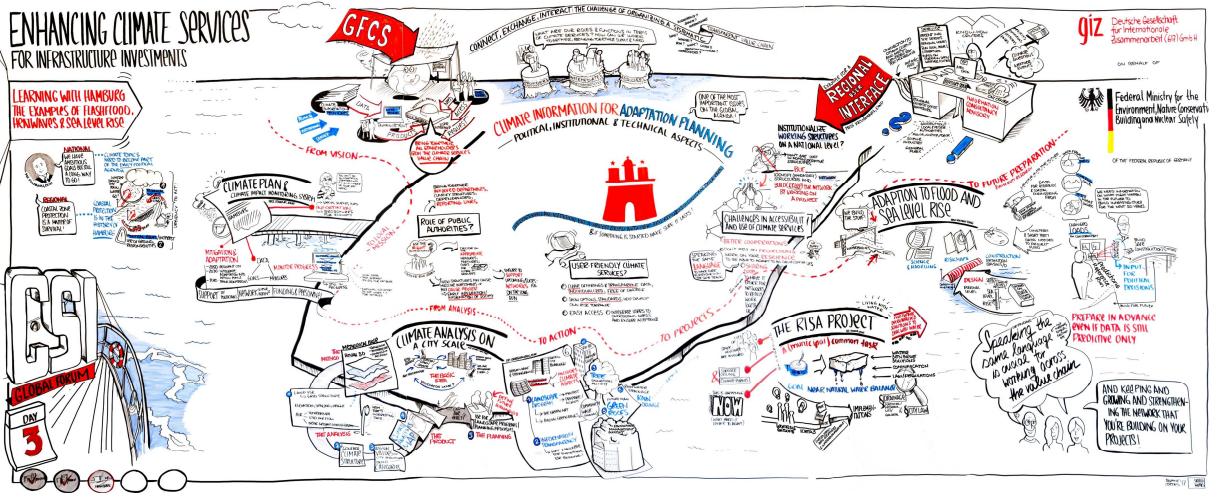
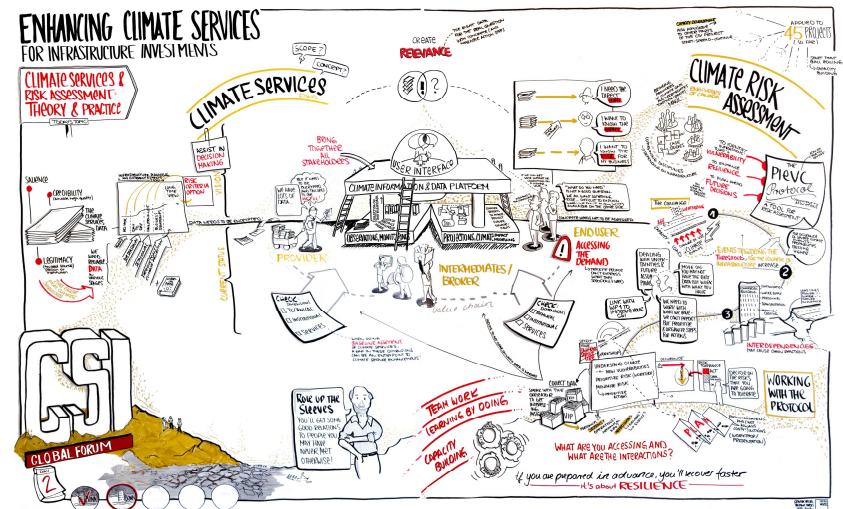
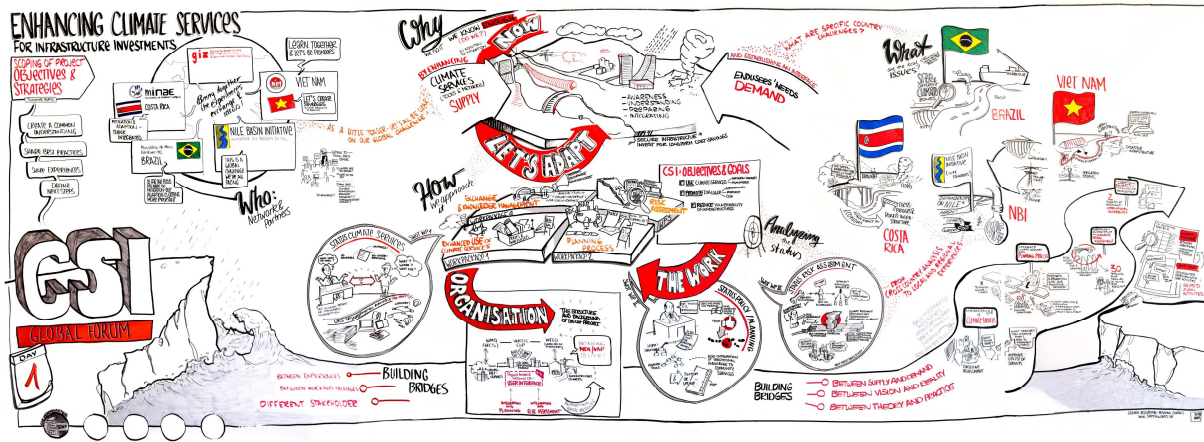
## DAY 5

The last day served to wrap up the entire week and position the project in the context of 'the GFCS' international agenda. The participants had the opportunity to receive a guided tour through the DWD. Finally, country teams planned their upcoming activities of the project.



## PROJECT INFORMATION & PARTICIPANTS

The service section contains vital information regarding the project and the participants that have joined the Forum.



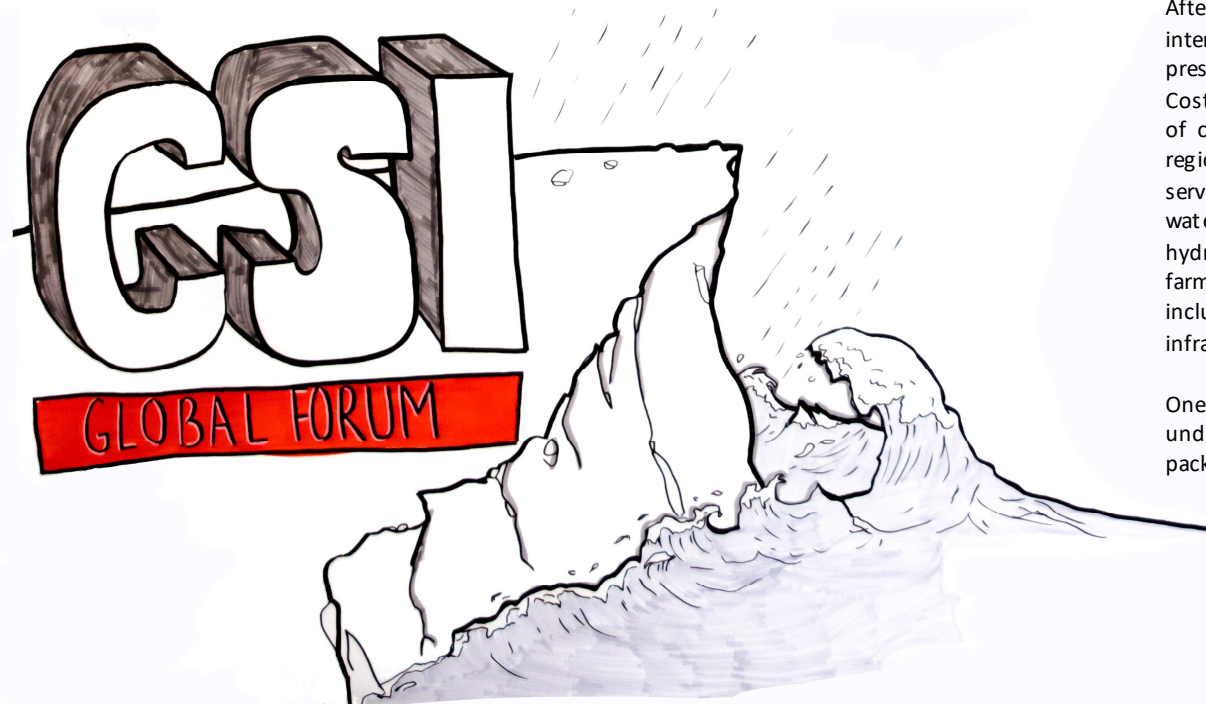
## VISUAL DOCUMENTATION

The visual documentation at hand summarizes the key topics, activities and discussions and topics of the Global CSI Forum. Each individual aspect can be reflected in the context of the bigger picture of the Forum.

This documentation is structured as follows: Each day of the global forum is depicted by first providing an overview and then zooming into specific topics of importance.



**“CLIMATE CHANGE IS A  
THREAT, BUT THERE IS  
ALWAYS A RESPONSE.”**



## Building Bridges

“Building Bridges” – a synonym for the diverse linking elements and processes of the project – a key effort of day one and the rest of the week. On day one, climate information providers, infrastructure practitioners and staff from governments met for the first time to learn and understand each others’ perspectives and roles related to the debate around climate services and infrastructure investments. They are the partners of the project and come from Brazil, Costa Rica, Vietnam and the Nile Basin (NBI) to Bonn to exchange their views and to look for common ground.

After the welcome note by the GIZ-CSI Global Team Bonn and the first interactive session to get to know each other, the partner countries presented their specific challenges related to the project’s topic. Brazil and Costa Rica have in common that their infrastructures are facing a diverse set of climate threats, especially for transportation infrastructure in different regions of their country requiring a diverse spectrum of customized climate services. The NBI will increasingly be challenged by the impacts of future water shortage on water discharge conditions of the Nile river threatening hydro-energy based energy production and irrigation of productive farmland. With rising sea levels, the Vietnamese Mekong Delta requires the inclusion of climate services into the planning of coastal protection infrastructure.

One important accomplished goal of this day was the generation of a deeper understanding of the cross-country challenges associated with the working packages and strategic objectives of the CSI project.

# Overview Day One

GIZ headquarters Bonn

## POINT OF DEPARTURE

"We know enough, it is time to adapt." The five minute movie captured the key challenges for infrastructure investments:

- Climate science needs to be translated into climate services in support of adaptation decision making.
- Climate services need to be an incremental component of infrastructure investment planning.
- Applying climate risk assessment is crucial for climate resilient infrastructure development.

## ACTIVITIES OF THE DAY

- Welcome note
- Getting to know each other.
- Introduction into the Global Forum.
- Country presentations
- Cross-country SWOT analysis of project challenges associated with working areas of the project

## ENHANCING CLIMATE SERVICES FOR INFRASTRUCTURE INVESTMENTS

SCOPING OF PROJECT OBJECTIVES & STRATEGIES  
TODAY'S TOPIC

CREATE A COMMON UNDERSTANDING

SHARE BEST PRACTICES

SHARE EXPERIENCES

DEFINE NEXT STEPS

MINAE  
Ministerio de Medio Ambiente  
COSTA RICA

MITIGATION & ADAPTATION - THINK INTEGRATED

Ministério do Meio Ambiente  
BRAZIL

SO FOR THE FOCUS WAS GREEN ONLY MITIGATION - BUT ADAPTATION IS GETTING MORE IMPORTANT

Bring together the experiences & ideas!

NILE BASIN INITIATIVE  
INITIATIVE DU BASSIN DU NIL

THIS IS A GLOBAL CHALLENGE WE'RE ALL FACING

Who: Network & Partners

giz  
DEUTSCHE ZUSAMMENARBEITUNG FÜR INTERNATIONALE ZUSAMMENARBEITUNG

LEARN TOGETHER & LET'S BE PIONEERS

VIET NAM  
LET'S CREATE SYNERGIES

GETTING TO KNOW EACH OTHER  
LANGUAGE ARE YOU WORSE?  
WHAT DO YOU DO?  
HOW LONG DO YOU STAY?  
HOW MANY PROJECTS?  
HOW MANY ISSUES?

Why WE DO IT

WE KNOW ENOUGH (DO WE?)

IN ADDITION TO MITIGATION

BY ENHANCING CLIMATE SERVICES (TOOLS & METHODS) SUPPLY

LET'S ADAPT

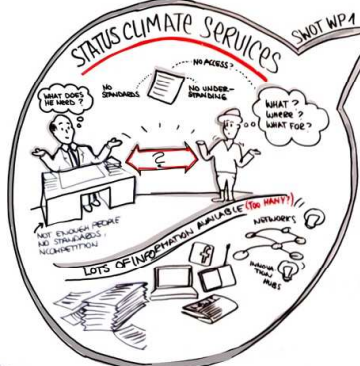
How we approach it

EXCHANGE & KNOWLEDGE MANAGEMENT

ENHANCED USE OF CLIMATE SERVICES  
WORKPACKAGE 1  
TOOLS & METHODS  
WORKPACKAGE 2  
PLANNING PROCESS  
WORKPACKAGE 3  
NDC/NAP  
POLICE  
ANNUAL REPORT  
OTHER CHALLENGES  
2014/15 ADAPTATION

ORGANISATION

THE STRUCTURE AND BACKGROUNDS OF THE CP-PRODUCT

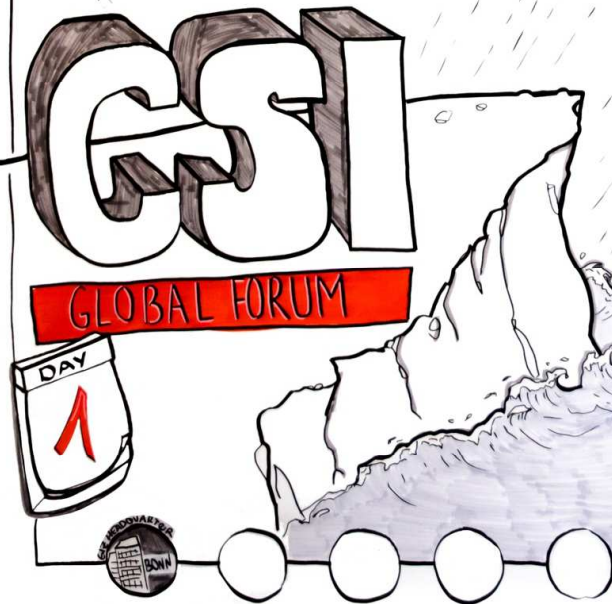


BUILDING BRIDGES

BETWEEN EXPERIENCES

BETWEEN WORKING PACKAGES

DIFFERENT STAKEHOLDER







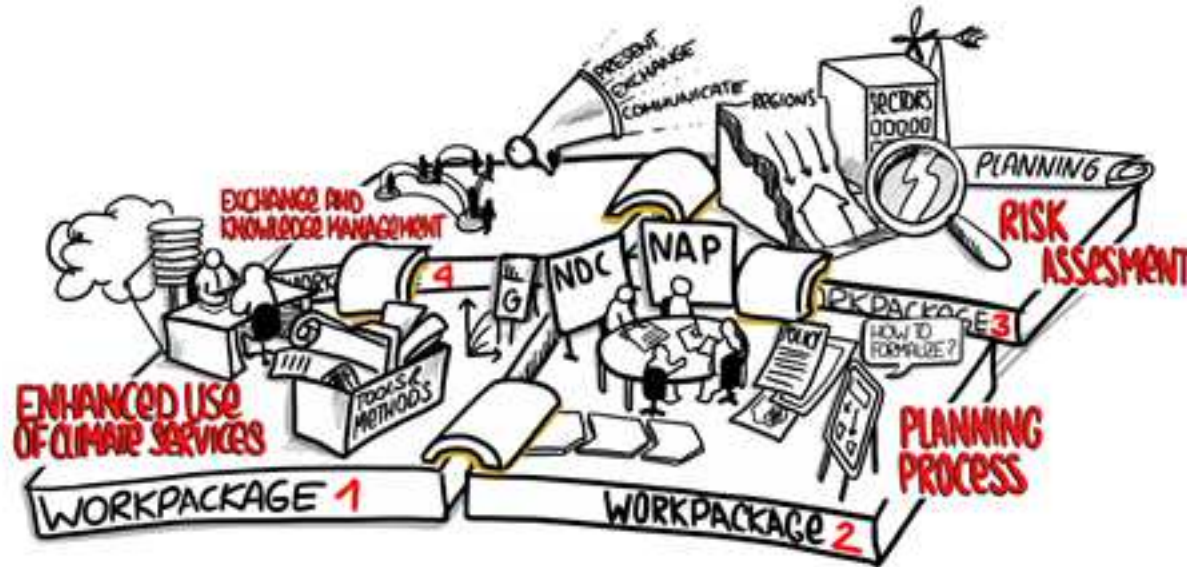
## Close up: CSI Working Packages

### Working Package 4 – Knowledge Transfer

WP4 includes the documentation and sharing of results and experiences between the partner countries, at international level and in diverse existing networks in the field of climate services and infrastructure engineering, such as the WMO-GFCS, UNFCCC and the World Federation of Engineering Organizations (WFEO). In addition the exchange with international actors such as development banks, international organizations and the professional public and the private sector will be promoted. The Global CSI-Forum and international conferences will be used to disseminate and discuss the project's findings.

### Working Package 3 – Risk Assessment

WP3 has a very practical approach and acts as a case study that affects all other working packages. It focuses on one particular infrastructure, where a tailor-made climate service product is developed for its application in a pilot climate risk assessment and management decision making process. Hence, the risk assessment is strongly connected to working packages one and two, as it can provide useful experience on how to operationalize a Climate Service User-Interface (WP1) and how to integrate the generic methods of climate risk assessment and management into planning (WP2). A key partner taking the lead in providing substantial experience and methodological knowledge on infrastructure risk assessment is Engineers Canada.



### Working Package 1 - Enhanced Use of CS

WP1 aims at facilitating debate and national dialogue for enhancing climate services for infrastructure investments. With an inventory of existing and utilized climate services in each partner country and the NBI, advisory and capacity development will be provided on how to improve climate services. The DWD, with its expertise in climate services, has the role to advise the national meteorological services on the implementation of measures for improving their climate services.

### Working Package 2 - Integration in Planning

WP2 focusses on mainstreaming climate services and climate risk assessments into a sector's or country's planning architecture. Entry points are diverse and include promoting the institutionalization of climate services in support of NAP development and NDC implementation as well as defining procedures to integrate the use of climate services in sectorial infrastructure planning, environmental licensing or building-code-development. Once specific entry points are agreed upon together with the national partners, technical guidelines will be developed and trainings implemented.

**“CLIMATE SERVICES – MORE  
THAN DATA PROVISION –  
THE NEEDS OF THE USER IS OF  
MAJOR CONCERN”**



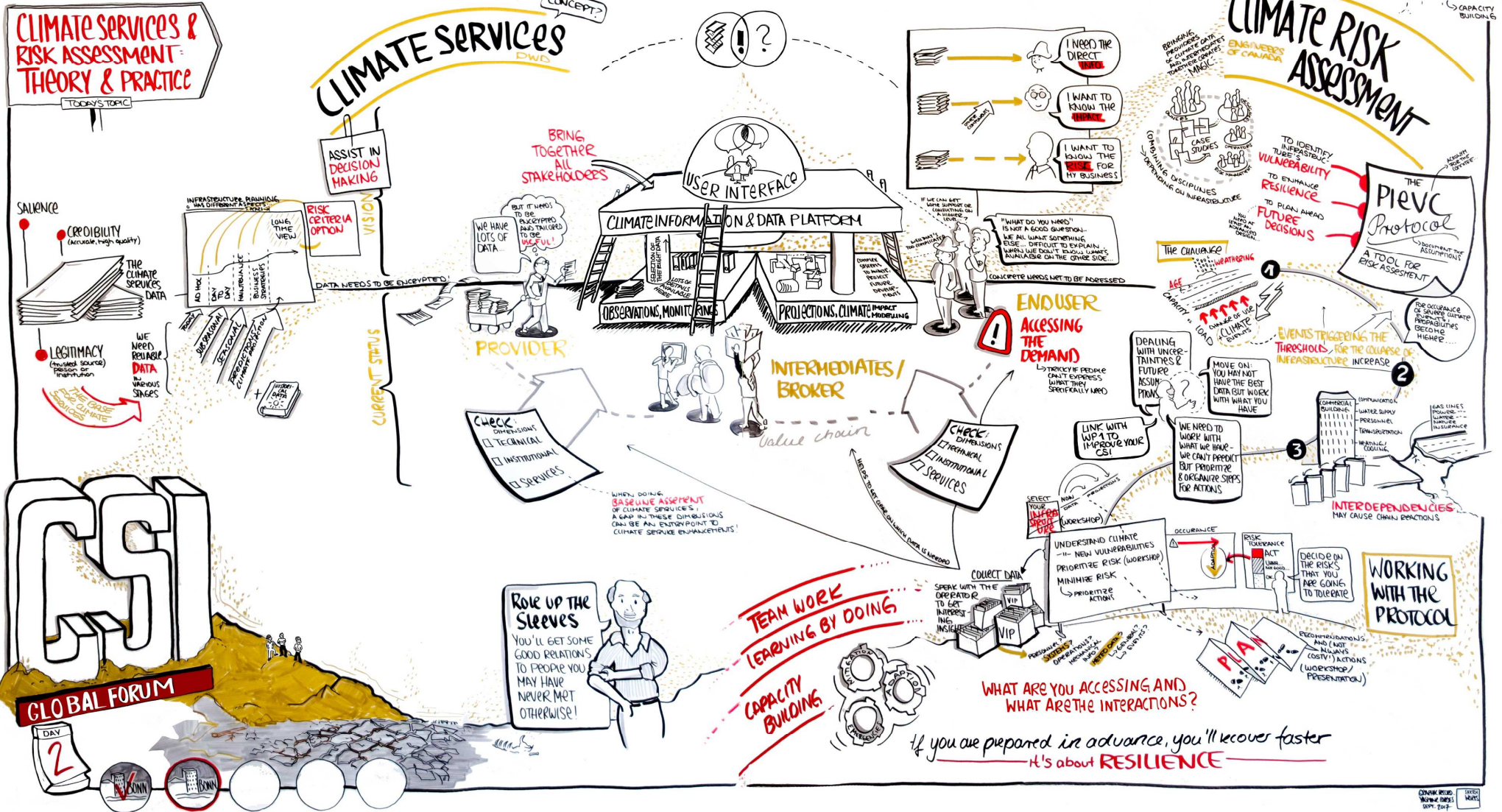
## Creating Relevance

What are climate services? The discussion around climate services is relatively new. As the pressure to invest in adaptation is constantly increasing, decision makers are facing the need for usable climate products and consultancy. But as climate information is often cryptic, difficult to understand and hence difficult to use for decision making, new approaches towards a customization and increased user-friendliness are being asked for.

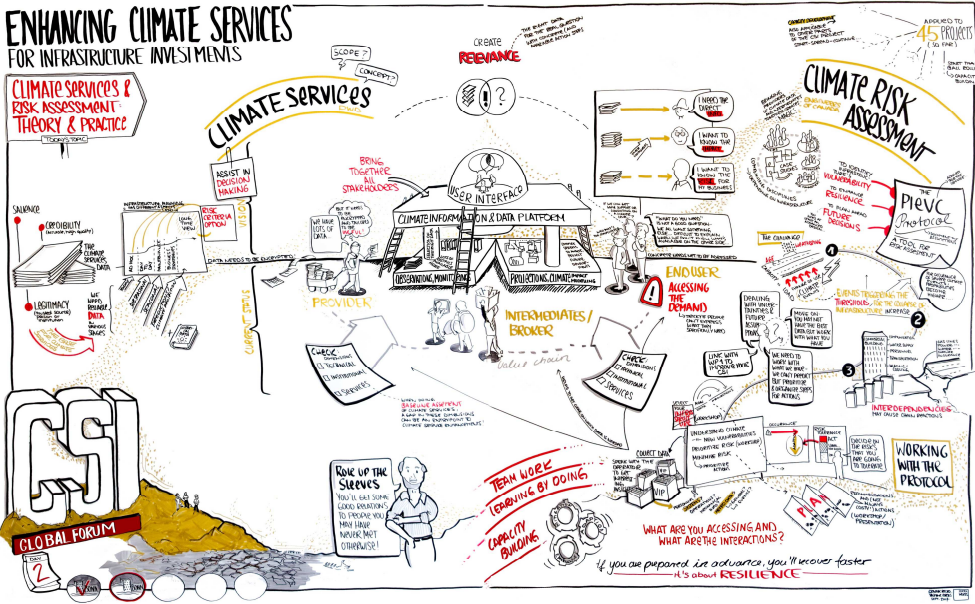
The objective of day two was to raise awareness about the added value of pursuing the concept of climate services as an important component of adaptation, which means how climate data needs to be processed in order to best support climate risk assessments of infrastructure and climate risk management decision making. The project's two main partners, the German Meteorological Service (DWD) and Engineers Canada dedicated their knowledge and experience from years of practicing climate service provision and infrastructure risk assessment to inform project partners and facilitate discussion on this matter.



## ENHANCING CLIMATE SERVICES FOR INFRASTRUCTURE INVESTMENTS







## ACTIVITIES OF THE DAY

- Wrap up of the previous day
- The Global Framework and fundamentals about Climate Services
- Climate Risk Assessment of Infrastructures – Conceptual foundations and examples from Limon, Costa Rica
- Train Trip to Hamburg

## CLIMATE SERVICES BEYOND DATA

Climate information by nature is a code which requires encryption to be applicable by decision makers. This notion is reflected by the term Climate Service, that implies the need for climate information providers to engage with users in an iterative processes of climate information selection and processing, assuring that climate products are tailored to the needs of the users and applicable with respect to their salience, credibility and legitimacy. Providing Climate Services also entails the offer of consultation services on how users shall interpret climate information and how to adhere and communicate uncertainty of climate information. A major challenge is the sustainable institutionalization of mechanisms of Climate Service provisions within a country, including the definition of procedures, roles and responsibilities shared between actors in the climate value chain.

### Related key project activities

- Baseline study of the current use of Climate Services by decision-makers
- Stocktaking of existing Climate Services with suppliers and end users.
- National dialogue forum on Climate Services
- identification of measures to improve user-orientation and relevance for the use of Climate Services
- Technical advice for weather services in the target countries regarding improvement measures.

## CLIMATE RISK ASSESSMENT, THE PIEVC

Climate risk assessments of infrastructure help to understand climate change impacts on different components of an infrastructure and to support the assessment and selection of adaptation measures. The assessment focusses on climate change trends, exposure of an infrastructure, the vulnerability of infrastructure components to climate change, as well as the consequences of infrastructure failure for the society. In terms of climate services, for example, engineers do not need information on changes of mean values of climate change, but probabilities of extremes that reflect impact thresholds of a system of interest, such as infrastructure components. Hence, the focus of user needs, requires user involvement and tailor made climate products for infrastructure planners and operators. Moreover, the performance of infrastructure operations and maintenance under conditions of climate change are also in focus of the PIEVC.

### Related key project activities

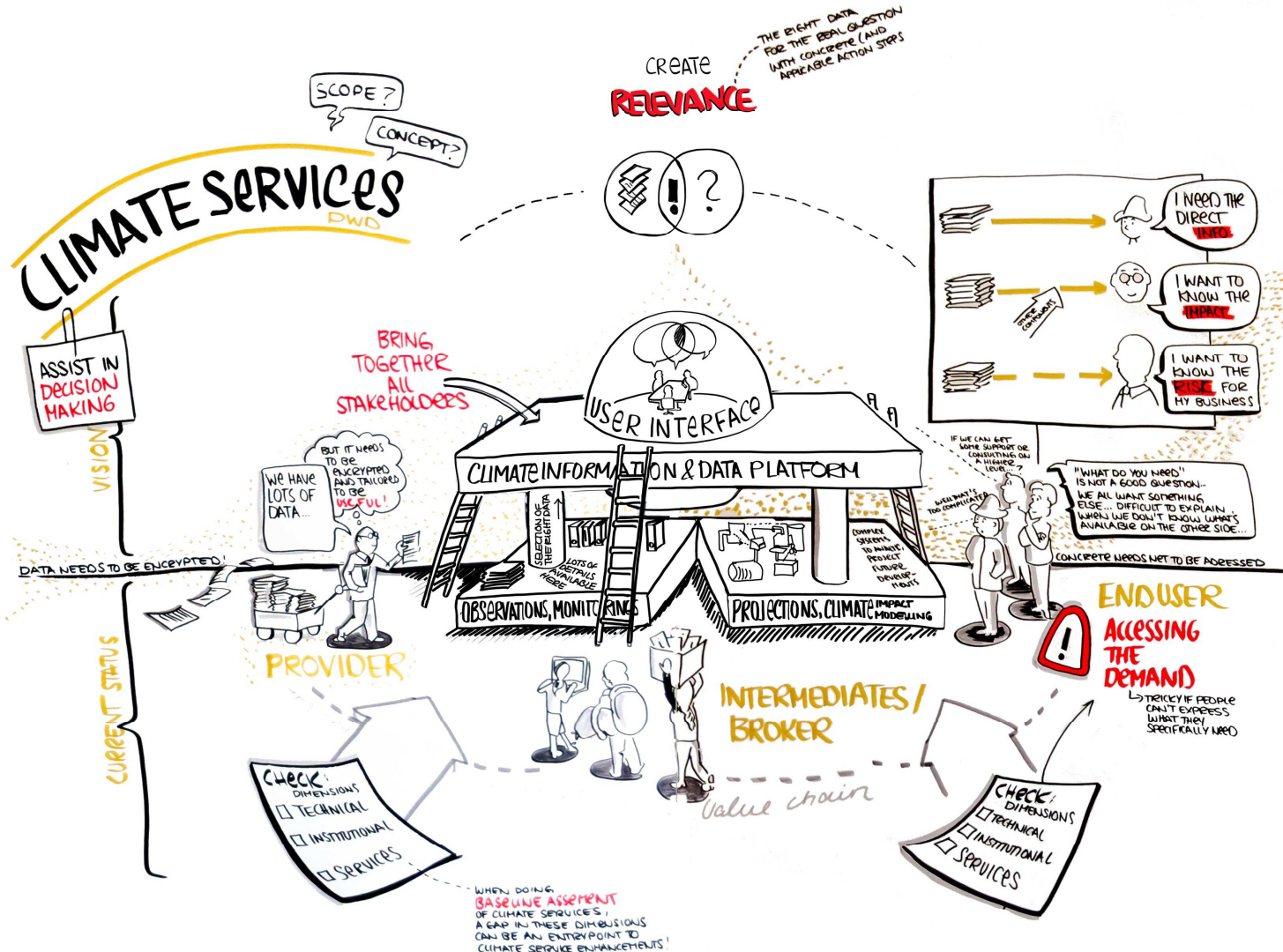
- Selection of infrastructure for pilot of climate risks assessment
- Conduct climate risk assessments with an integrated human capacity development component.
- Development of country specific "knowledge-products"
- Development of handouts and training materials.

## Close up: User Interface Platform

The User Interface Platform (UIP) is a major component of the GFCs Framework and reconciles the interests of the climate service users and providers. It is embedded within an overall institutional framework for climate services. It acts like a hub, that provides room for provider-user interaction for the negotiation

and co-development of user-friendly climate products applicable for decision-making. Hence, a UIP provides room for the exchange of experiences, knowledge and needs. By concept, a institutionalized UIP is based on four key pillars that allow for the harmonization of climate services demand and supply:

- **Definition of user needs:** Users are enabled to express their climate information needs with respect to information content, but also regarding the availability, accessibility, usability, formats, support, advice, etc.
- **Definition of provider capabilities:** The providers can explain their capabilities to provide climate information and climate products, helping users to understand the limits and opportunities of such products.
- **Reconciliation of needs and capabilities:** Mechanisms and procedures guide climate information providers and users to arrive at best possible products under country specific conditions.
- **Promotion of usable and decision-relevant CS products:** The co-production of decision-relevant and usable climate service products is a key task of a UIP. Raising awareness about the role of Climate Services for decision making is important to create demand for Climate Services.



In order for an UIP to evolve, it should contain mechanisms which enable feedback, dialogue, outreach and evaluation. The generation of genuine ownership of the GFCs by government authorities and Climate Service providers is essential. This includes political and financial commitment by stakeholders and meteorological agencies to develop and institutionalize a viable UIP.



## Organizing the Network

**“SPEAKING OR  
FINDING THE SAME  
LANGUAGE  
IS CRUCIAL FOR  
WORKING ACROSS THE  
VALUE CHAIN”**



HAMBURG City. The city hosts the second biggest harbor in Europe, with the Elbe river connecting the city with the North Sea. Hence, water is the greatest economic opportunity for the city, but at the same time the biggest threat, particularly under conditions of climate change. Hamburg has set on track a number of initiatives to offset climate risks associated with flashfloods, storm surge, sea level rise and increasing heat stress. Thereby, authorities have gained some experience with using climate information for adapting to these risks. Nevertheless, in Hamburg climate services are provided based on specific pilot and research projects. These circumstances, in which Climate Services are still in the phase of being explored on the basis of projects make Hamburg an interesting example for the CSI project allowing the discussion about the challenges ahead for enhancing the institutionalization of climate services.

The Forum's participants had the chance to meet representatives of Hamburg authorities, as well as universities, climate information value adding private companies and authorities responsible for roads, bridges and coastal protection infrastructure to discuss the use of climate services for adaptation. The program was complemented by discussions with the Hamburg Port Authority and field visits into the harbor and the cities flood risk management infrastructure.

The discussions were structured in a manner to translate the provisions of the key pillars of climate services of the GFS into the Hamburg context, including tracking the roles of different actors in the generation and application of climate services as well as discussing different facets of institutionalizing climate services.



# Overview Day three

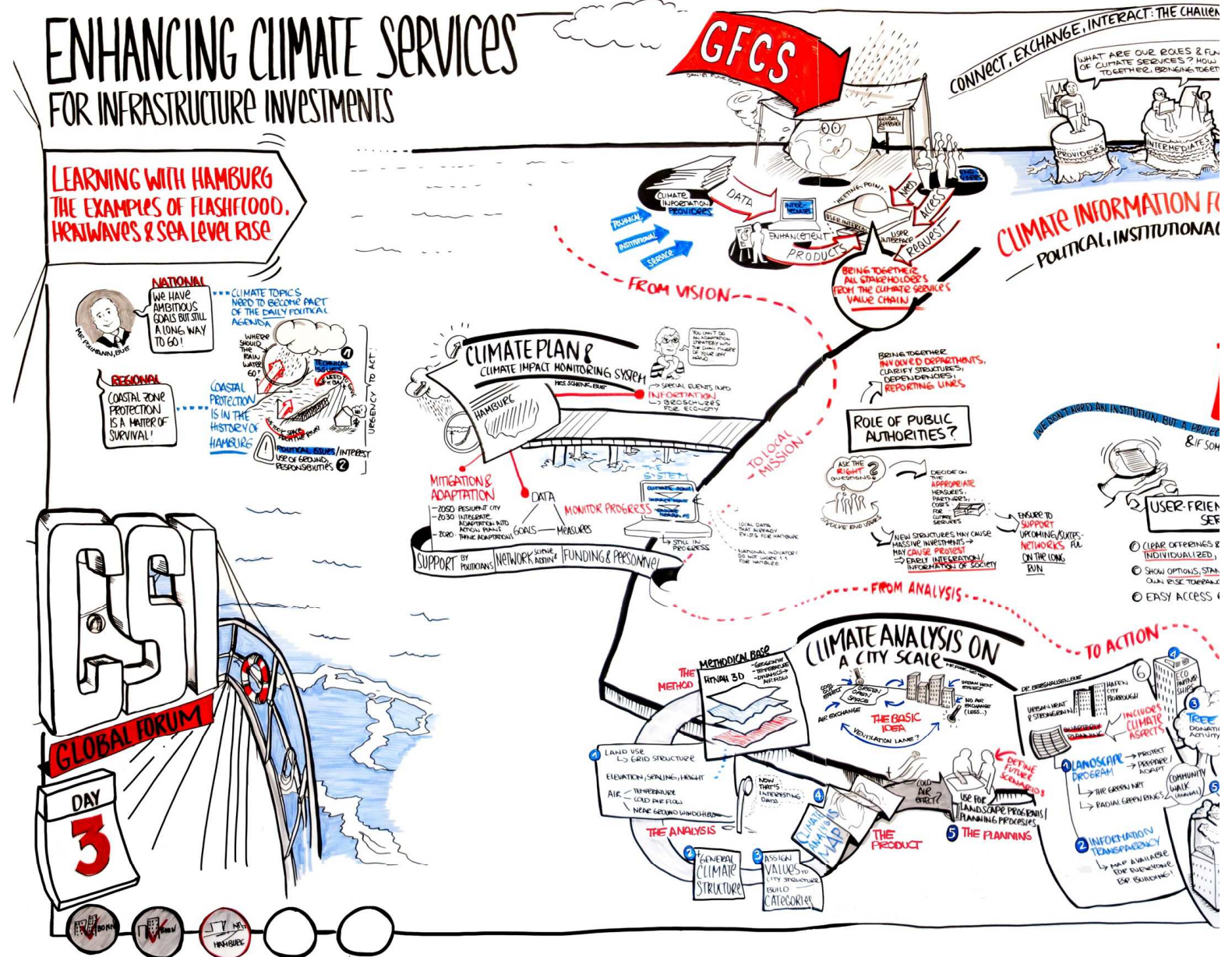
Hamburg

## ACTIVITIES OF THE DAY

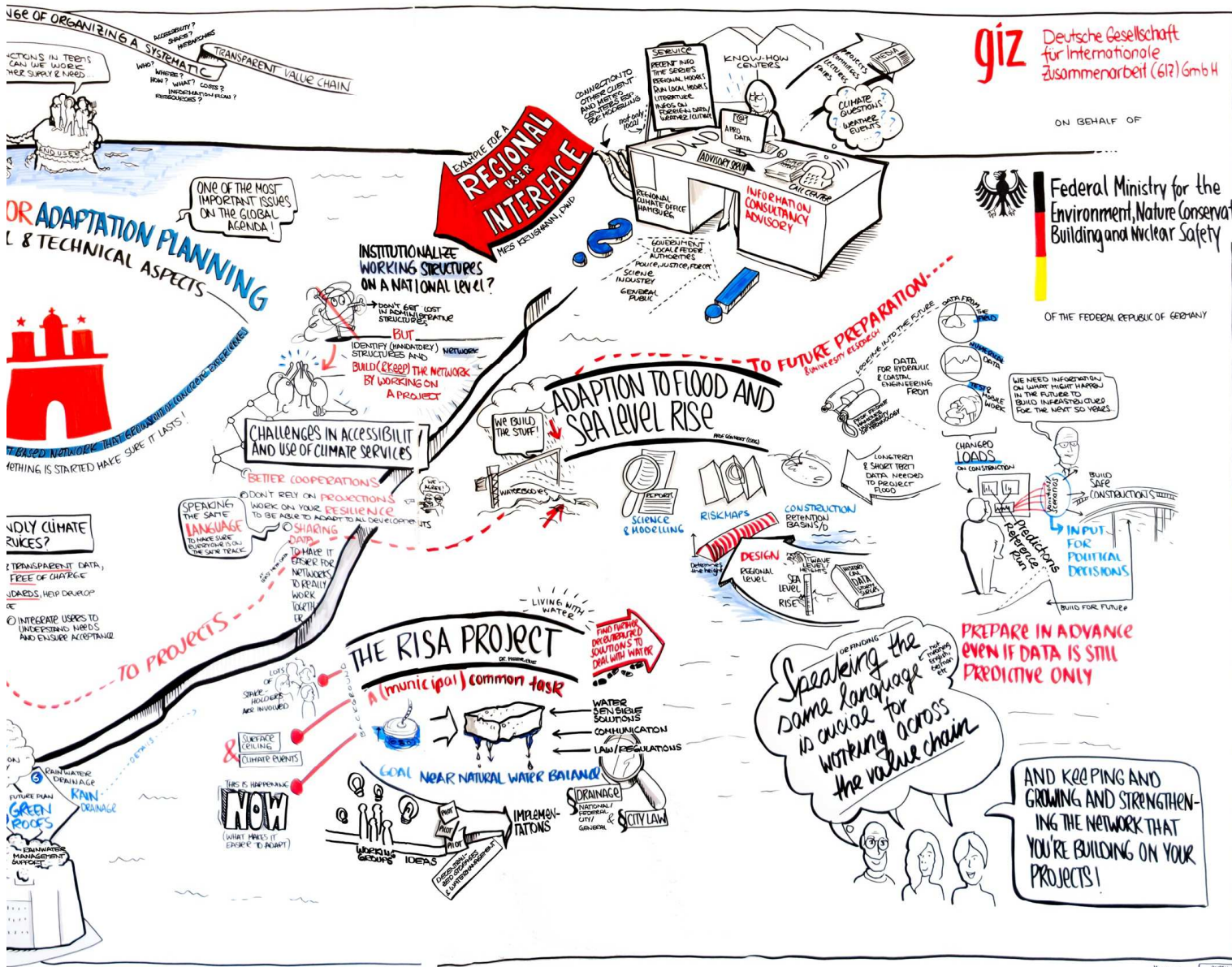
- Classification of Hamburg Climate Service Actors based on the concept of the Climate Service value chain.
- Presentation on the DWD-Hamburg regional User-Interface Platform
- Facilitated discussion on challenges and the role of actors for the provision of climate services in Hamburg
- Visit of the Plaza of the new philharmonic

## HAMBURG CLIMATE PLAN

Hamburg has a Climate Plan that includes both climate strategies, mitigation and adaptation. The plan is linked to indicators for monitoring climate change impacts in support of in-land flood protection. Climate data are constantly recorded by the German Meteorological Service (DWD) and show how the climate has already changed. The climate indicators have been developed in cooperation with all the northern German states, the DWD and the science institutions.





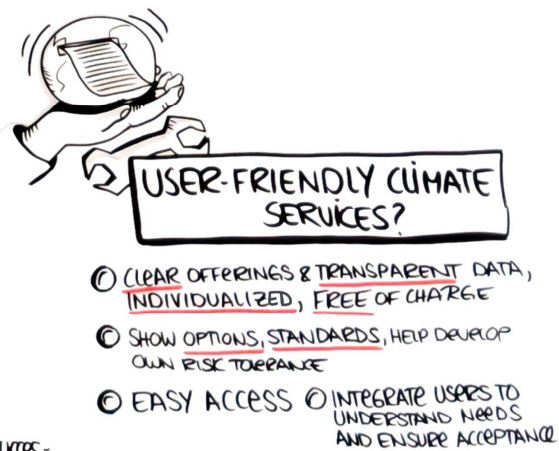
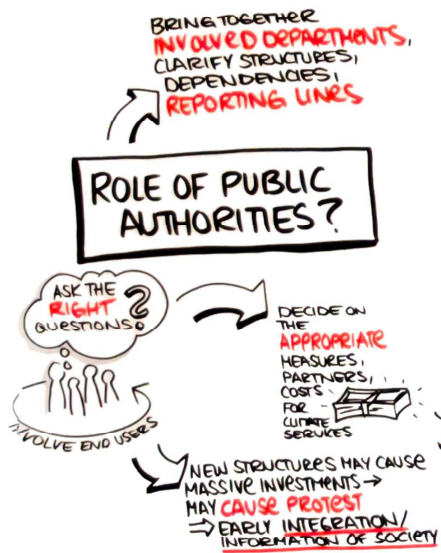


# URBAN CLIMATE ANALYSIS

The simulation of micro-spatial distribution of the future number of heat and summer days, and tropical nights in the entire city helps to rethink approaches towards city planning, and prioritize measures to reduce heat stress such as conserving green space, the greening of infrastructure like roof-tops of settlement areas, and preparing vulnerable people to respond adequately.

# RAIN INFRASTRUCTURE ADAPTATION (RISA)

The objective of the RISA Project is to develop innovative solutions to manage increasing water scarcity and torrential rains. This requires redesigning sewage infrastructure in the city, such as integrating underground rain water harvesting infrastructure to slow water run-off during torrential rains and build a reservoir for times of water scarcity. Climate services, such as the probability of torrential rains exceeding a specific threshold of down-pouring can support decisions on the design and size of sewage infrastructure.



## Close up: Institutionalization of Climate Services in Hamburg

In Hamburg, the public authorities act as brokers of climate services, they initiate climate change adaptation projects for which climate services are required. Thereby, different authorities and sub-ordinated authorities in Hamburg acquire climate services from different sources, depending on their prevailing networks and requirements. In some cases, collaboration is strong with the regional climate center of the German Meteorological Service (DWD), in others, collaboration exists with the German Climate Service Center (GERICS) or the regional climate center, as well as value adding private companies such as Geo-Net offering the processing of climate meta data to arrive at city level climate tailor made climate service products.

Hence, cooperation networks function on a semi-formal basis, where strong institutional and personal relations that persisted for many years are an important factor enabling collaboration between climate service providers, brokers and users. The semi-market based and loosely formalized environment for climate services implies that for every adaptation project questions related to sharing, access and transfer of data have to be clarified. Hence, in Hamburg mechanisms for accessing and providing climate services are not based on regulations and institutionalized procedures. Hence, success in developing tailor made climate service products, depends heavily on political leadership, available workforce, technical and financial resources. In Hamburg this is reality, but is it desirable?



# FLOOD RISK MANAGEMENT IN HAMBURG



Hamburg harbor with view on the new philharmonic



Hamburg harbor with view on the river Elbe



Flood protection gate



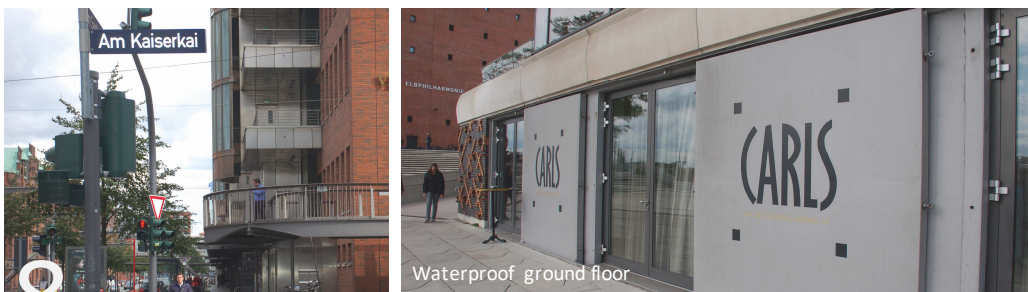
# HAMBURG WATERS



Hamburg harbor with view on historic warehouse complex



Evacuation routes

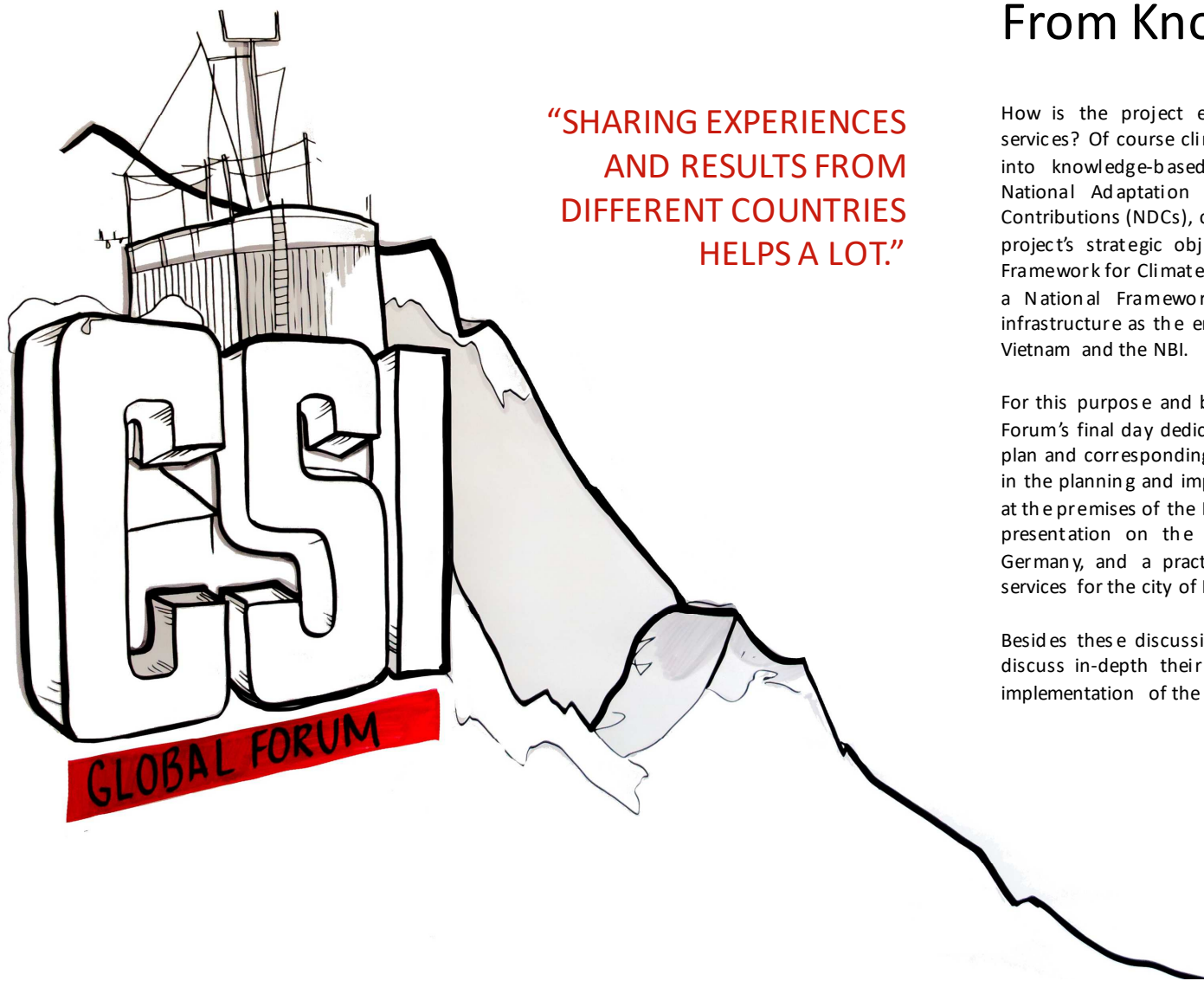


Waterproof ground floor

The Hamburg harbor and the neighboring city districts of the river Elbe have ever since been exposed to storm surge. Although, being 150 km away from the North Sea, flood risk in the city of Hamburg is also influenced by marine tidal regimes. Moreover, the deepening of the river bed to allow even bigger container ships to enter the harbor has increased tidal amplitudes revealing higher exposure levels to flood. Climate change adds to this. Storm surges might increase in terms of magnitude and duration. Combined with increased sea level, the magnitude of storm surges might be amplified when the storm impact coincides with high tide.

The city administration acknowledges these emerging conditions. The harbor has invested in higher protection walls at their landing spots, and improved their warning system. The system informs when operating systems and ship-passages have to be stopped, especially during high winds conditions. Substantial climate risk reduction measures that do not compete with urban development aspirations have been implemented in the neighboring city districts of the Elbe river. Since these areas represent a tourist attraction and recreational area, flood protection infrastructure, such as flood protection walls and dykes functioning as sidewalk along the river banks, are gently integrated into the city's urban morphology. The acceptance of residual risk also implies anchoring preparedness measures in the city's landscape. These include, semi-automatic flood gates, high lying walk-ways for every day use that function as evacuation routes, and most astonishing: Any ground floor entrance and window requires by regulation waterproof closure preventing damage in case of substantial flooding. To enable the urban climate risk management system to operate smoothly, maintenance and operational mechanisms with clearly defined Standing Operation Procedures (SOPs) are in place, including an early warning system that informs and provides instructions for action to the general public.





**“SHARING EXPERIENCES  
AND RESULTS FROM  
DIFFERENT COUNTRIES  
HELPS A LOT.”**

## From Knowledge to Action

How is the project embedded in the international agenda on climate services? Of course climate services represent a major vehicle for investing into knowledge-based adaptation. Hence, for the implementation of National Adaptation Plans (NAPs) as well as Nationally Determined Contributions (NDCs), climate services play a pivotal role. Therefore, the CSI project's strategic objective is to translate the provisions of the Global Framework for Climate Services (GFCS) into the discussion on how to set up a National Framework for Climate Services (NFCS) with a focus on infrastructure as the entry-point in the partner countries Brazil, Costa Rica, Vietnam and the NBI.

For this purpose and based on the practical experiences in Hamburg, the Forum's final day dedicated time to learn about the GFCS's implementation plan and corresponding institutional mechanisms for engaging stakeholders in the planning and implementation of climate services. A video conference at the premises of the DWD in Offenbach with the GFCS representatives, the presentation on the status of the GFCS's national implementation in Germany, and a practical example from the a DWD project on climate services for the city of Mainz, enriched the discussion.

Besides these discussions the CSI country teams had space and time to discuss in-depth their country specific strategic approaches towards the implementation of the project's activities.

# Overview Day Five

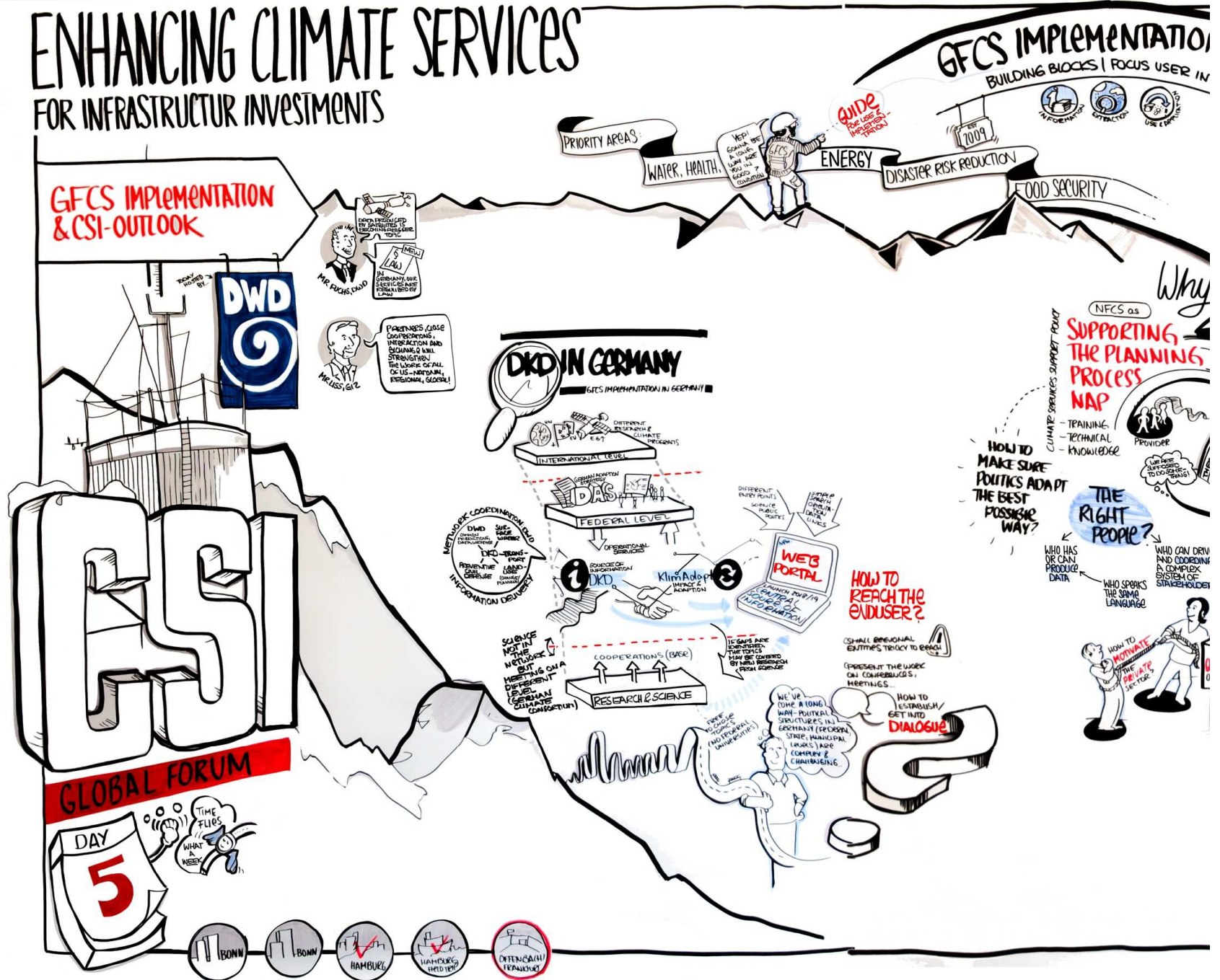
DWD Offenbach

## GFCS & NATIONAL FRAMEWORKS

The GFCS facilitates an improved management of climate risks and opportunities arising from climate variability and change through enhancing the development of science-based climate information and prediction providing decision support for planning, policy and practice. Key future challenges identified are access to, quality of and capacity to provide climate services.

The video conference with representative of the WMO-GFCS instigated a fruitful discussion about the national implementation of the GFCS. Ideally, the establishment of a National Framework for Climate Services (NFCS) acts as a fundamental driver to make the best information available for free and for everyone, to support for example, the implementation of the National Adaptation Plans (NAP). The development of tailor-made climate services for infrastructure investments challenges climate service providers and users equally – As infrastructure investments are long-term, long-term climate projections are required that are by nature associated with high uncertainties, requiring climate monitoring and accommodating uncertainty into infrastructure planning.

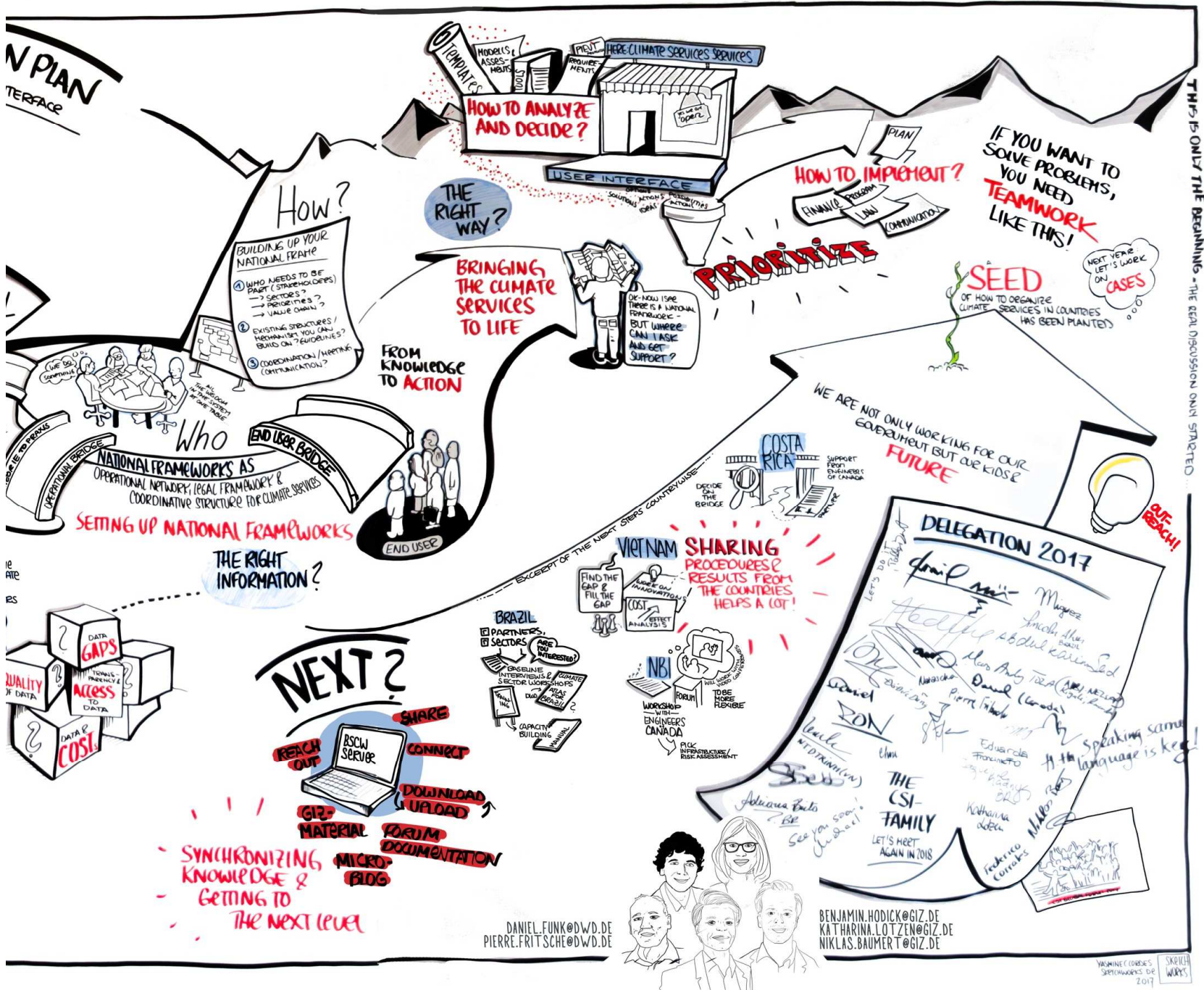
# ENHANCING CLIMATE SERVICES FOR INFRASTRUCTURE INVESTMENTS





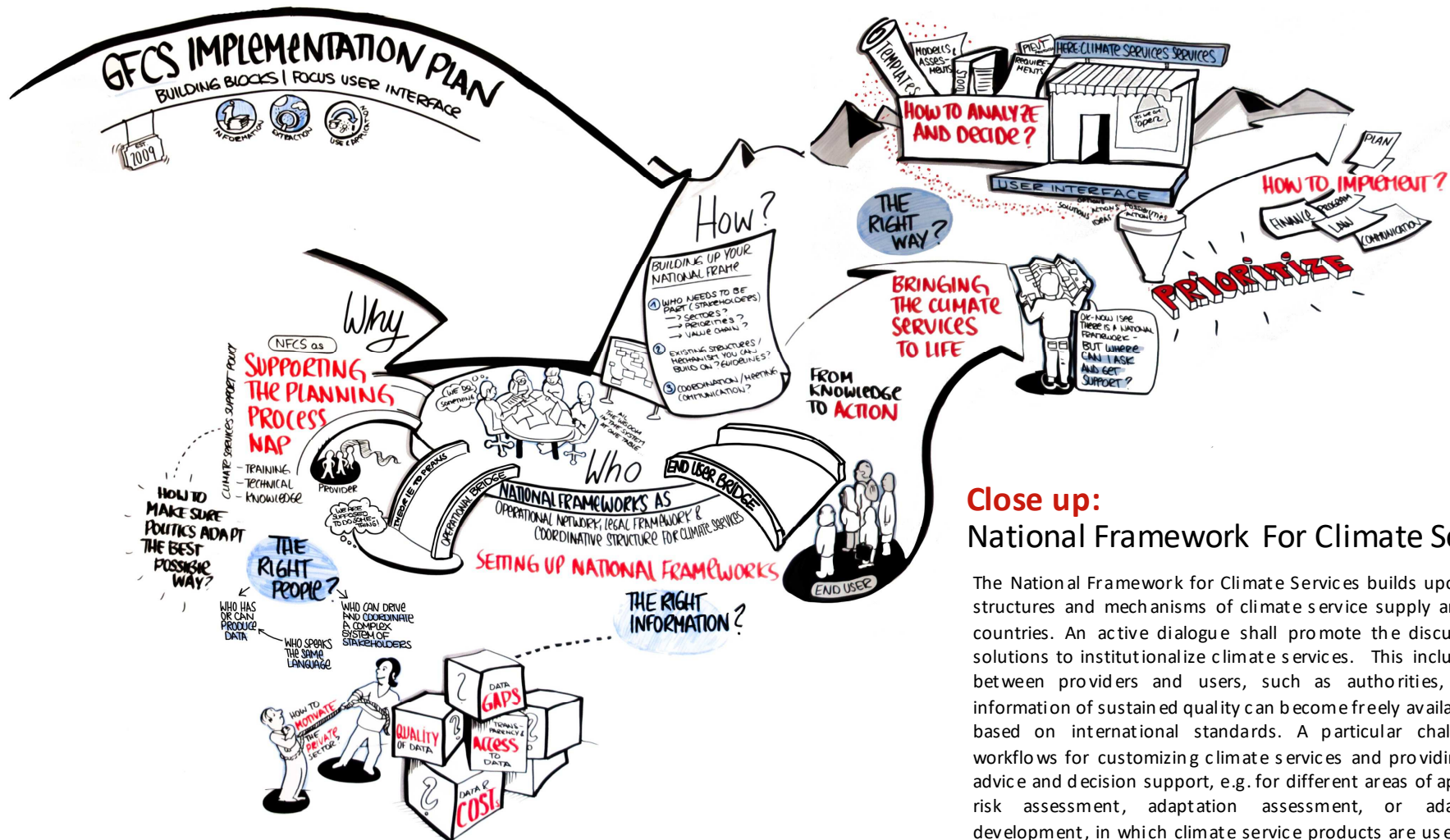
# DKD IN GERMANY

The climate service branch of the DWD (DKD) represents the national implementation of the GFCS in Germany. One key product already in place is the German Climate Change Atlas. Currently, the DKD acts as a networking platform for dialogue by public authorities, where experiences with climate service applications are shared. Eight federal agencies are currently registered. A Memorandum of Understanding is in the making to act as a basis for collaboration. The DKD is complemented by a System of services for climate change adaptation called "KlimAdapt" which is hosted by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. It also represents a network of authorities that provide value-adding climate information, such as climate impact, vulnerability and risk, adaptation monitoring, and capacity development.



# FUTURE COUNTRY MILESTONES

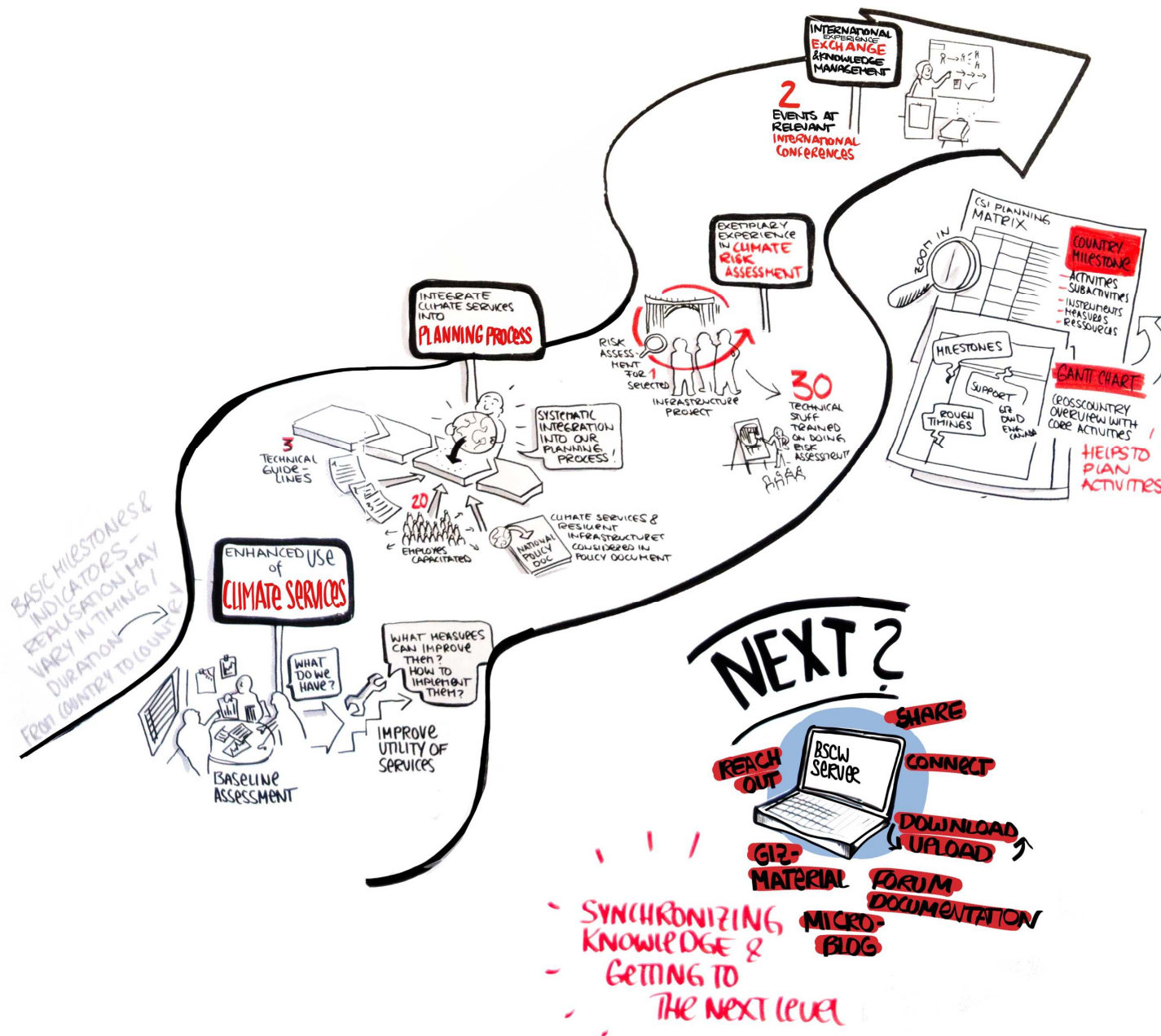
Brazil aims at engaging with a number of prioritized sectors to stimulate the climate service discussion and to search for a pilot case study (WP3). Moreover, the development of a similar product such as the Climate Atlas from the DWD is in focus. The NBI is hosting the Nile Basin "Climate Week" in early 2018, engaging the different Hydro-Met Services from the Nile Basin countries as well as hydro-electric operators and associated agencies. Viet Nam focusses on integrating climate services into the development of their coastal protection plan in the Mekong Delta. And, Costa Rica has decided to focus on vulnerable bridge infrastructures as a point of departure for implementing the three working packages.



## Close up: National Framework For Climate Services

The National Framework for Climate Services builds upon already existing structures and mechanisms of climate service supply and demand within countries. An active dialogue shall promote the discussion on national solutions to institutionalize climate services. This includes arrangements between providers and users, such as authorities, on how climate information of sustained quality can become freely available and accessible based on international standards. A particular challenge is defining workflows for customizing climate services and providing well structured advice and decision support, e.g. for different areas of applications such as risk assessment, adaptation assessment, or adaptation solution development, in which climate service products are used to support cost-benefit analysis, or effectiveness analysis of competing adaptation options. For example, in the case of infrastructure risk assessment, customized products are required for each of the integrated components of an infrastructure. Moreover, how can climate service products inform planning of new infrastructure and adjustments of building codes? It is obvious that climate service providers do not necessarily know what the customer demands. Hence, defining modes of interaction between providers and users of climate information shall play a central role to establish and institutionalize a well-functioning User-Interface Platform within a National Framework for Climate Services.





## CLOSING REMARK

The Global CSI Forum has once more demonstrated that it is important to exchange ideas between countries facing similar challenges. Nevertheless, each country or region has a specific road to go to achieve the implementation of all activities defined in the CSI project. The next CSI Global Forum in 2018/19 will bring about first interesting results to be presented, shared, compared, and discussed between the different partner institutions and across national borders.



**Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**

Climate Services for Infrastructure Investments (CSI)  
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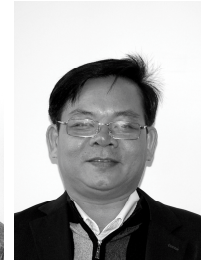
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minae  
MINISTERIO DE AMBIENTE Y ENERGÍA

Deutscher Wetterdienst  
Wetter und Klima aus einer Hand



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