Capgemini

Knock knock. Who's there?

It's me, your bot!

10th February 2021

Michal Ujma, Capgemini
Christian Herrmann, Capgemini

Michal Ujma

- Senior Software Engineer -

- Passionate about all things AI.

- Responsible for the chatbot solution development at Capgemini's Digital unit.

- Experienced in building microservice oriented applications.

Christian Herrmann

- Senior Enterprise Architect -

- Focused on cloud architecture and serverless architecture.

- Part of Capgemini's Public Sector Innovation Lab.

- Developed several chatbot prototypes and showcases for the public sector in Germany.

Kick-off your bot journey!
Beginner-level session

What's on the menu?
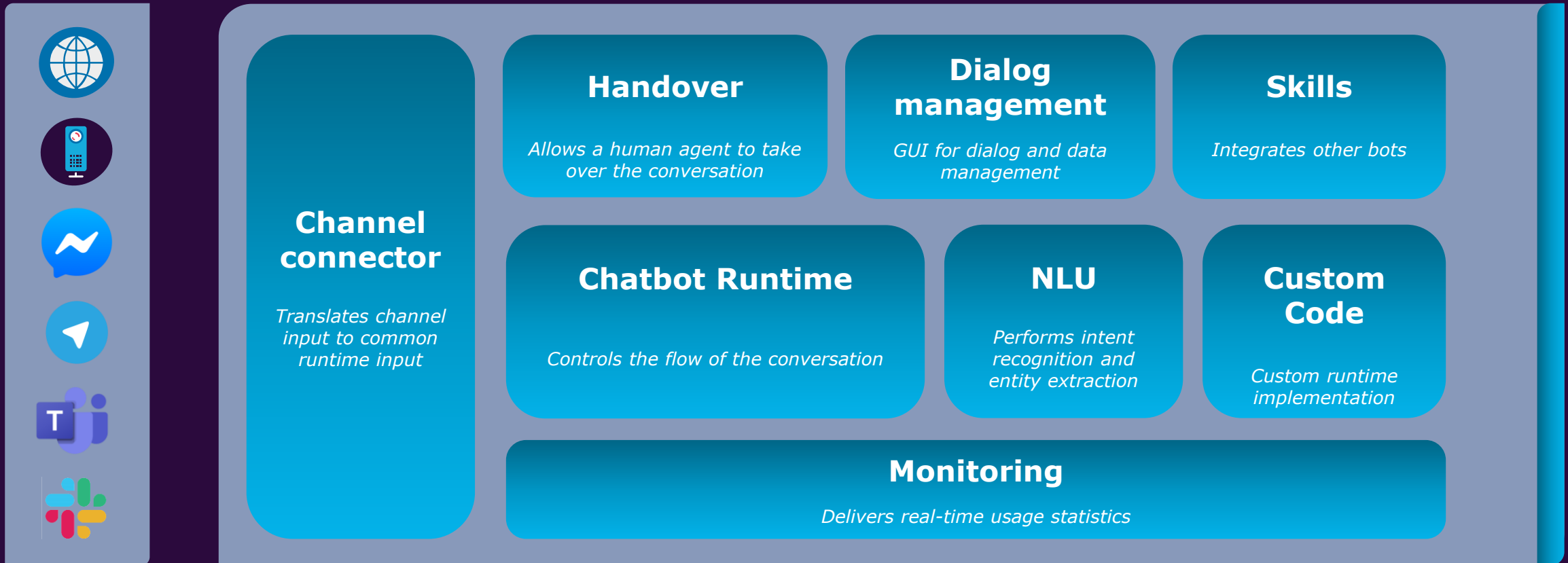
In this session, we want you to get an overview about the most important concepts of bot architecture

We will show you how even non-AI developers can spin up their own chatbot within minutes

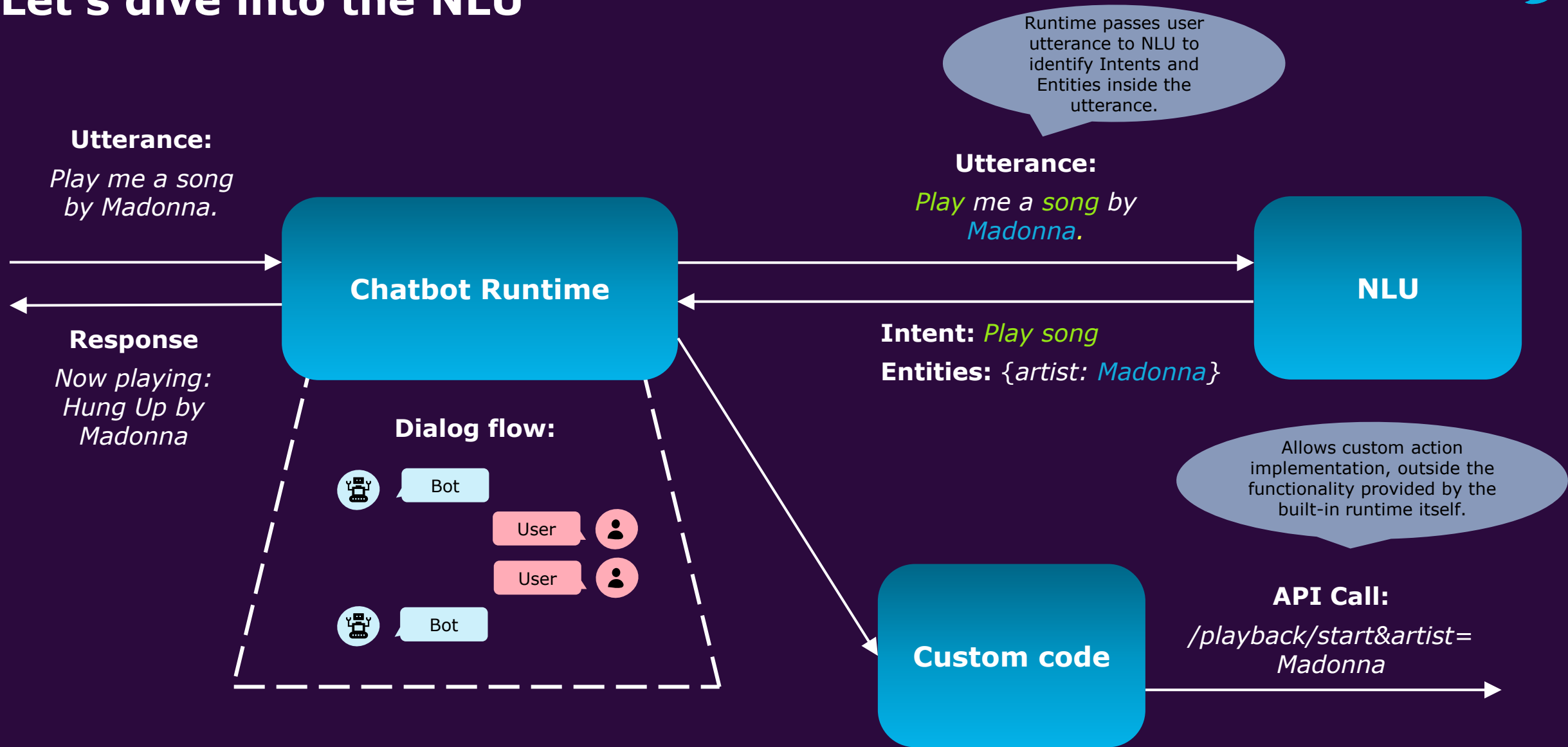You will see a success story that demonstrates how chatbots can help solving a real-world problem

Channel connector

Translates channel input to common runtime input

Handover

Allows a human agent to take over the conversation

Dialog management

GUI for dialog and data management

Skills

Integrates other bots

Chatbot Runtime

Controls the flow of the conversation

NLU

Performs intent recognition and entity extraction

Custom Code

Custom runtime implementation

Monitoring

Delivers real-time usage statistics

In 2020, organizations report a reduction of up to 70% in call, chat and/or email inquiries after implementing a chatbot or virtual customer assistant

Let's dive into the NLU

Utterance:

Play me a song by Madonna.

Response

Now playing: Hung Up by Madonna

Chatbot Runtime

Dialog flow:

Bot

User

User

Bot

Runtime passes user utterance to NLU to identify Intents and Entities inside the utterance.

Utterance:

Play me a song by Madonna.

NLU

Intent: *Play song*
Entities: *{artist: Madonna}*

Allows custom action implementation, outside the functionality provided by the built-in runtime itself.

Custom code

API Call:

/playback/start&artist= Madonna

Live demo: Provision your own chatbot

Bot Framework Composer
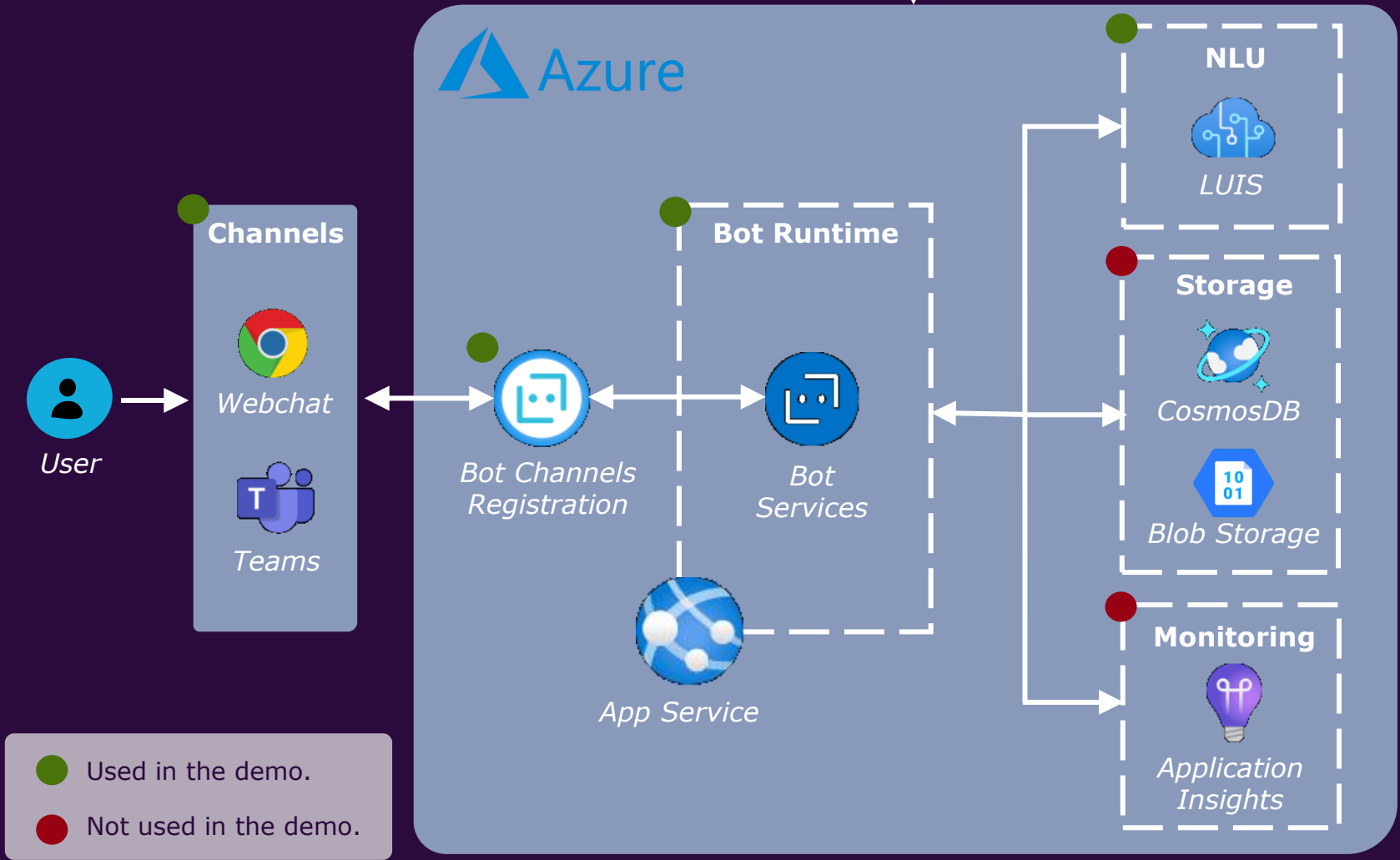
Our demo setup

https://github.com/michaluu/oop-spotify-bot

- We are using **Microsoft Bot Framework Composer** for development and deployment activities.

- You can try out the demo yourself. Please follow the **QR Code** to the repository.

Azure

Channels

Webchat

Teams

User

Bot Runtime

Bot Channels Registration

Bot Services

App Service

NLU

LUIS

Storage

CosmosDB

Blob Storage

Monitoring

Application Insights

● Used in the demo.

● Not used in the demo.

The German youth welfare offices recognized an endangerment of the best interests of a child or young person in roughly 50,400 cases

Source: https://www.destatis.de/EN/Press/2019/11/PE19_N010_225.html

Due to the pandemic, more than 8 in 10 children reported an increase in negative feelings. One third of households had a child or caregiver reporting violence in the home. Children reported that violence was higher when schools were closed, compared to when they were attending in person.
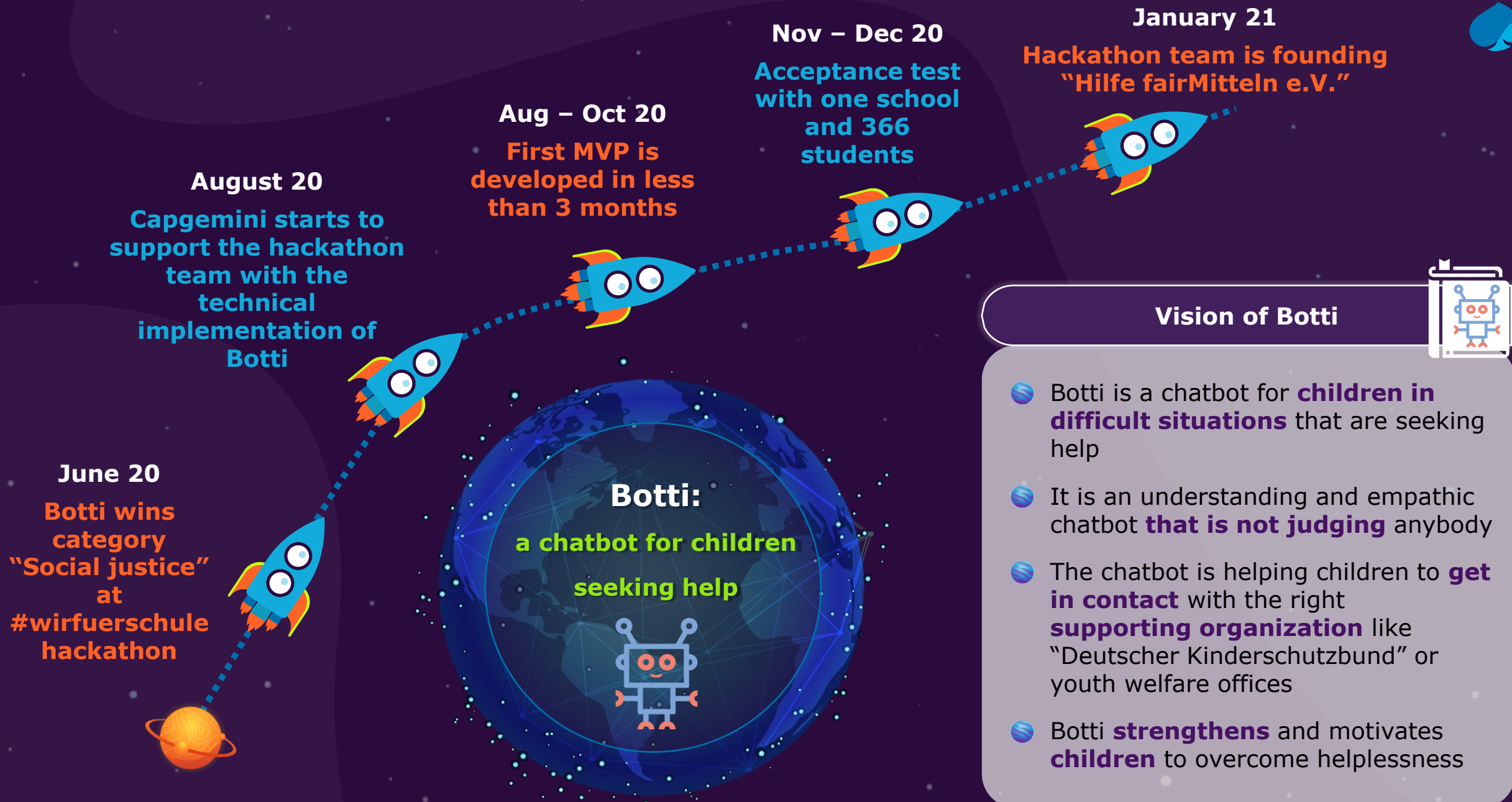
Source: https://resourcecentre.savethechildren.net/library/hidden-impact-covid-19-children-global-research-series

One of six students is affected by mobbing

Source: https://zeichen-gegen-mobbing.de/zahlen

Germany just in upper midfield regarding children's well-being in high-income countries

Source: https://www.unicef.de/informieren/aktuelles/presse/2020/report-kindeswohl-in-reichen-laendern-in-gefahr/224250

June 20

Botti wins category "Social justice" at #wirfuerschule hackathon

August 20

Capgemini starts to support the hackathon team with the technical implementation of Botti

Aug – Oct 20

First MVP is developed in less than 3 months

Nov – Dec 20

Acceptance test with one school and 366 students

January 21

Hackathon team is founding "Hilfe fairMitteln e.V."

Botti:

a chatbot for children seeking help

Vision of Botti

- Botti is a chatbot for **children in difficult situations** that are seeking help
- It is an understanding and empathic chatbot **that is not judging** anybody
- The chatbot is helping children to **get in contact** with the right **supporting organization** like "Deutscher Kinderschutzbund" or youth welfare offices
- Botti **strengthens** and motivates **children** to overcome helplessness

Botti
MVP

Child-friendly chat interface

Design of two personas for the use case "children's well-being" covering several problems in school and at home
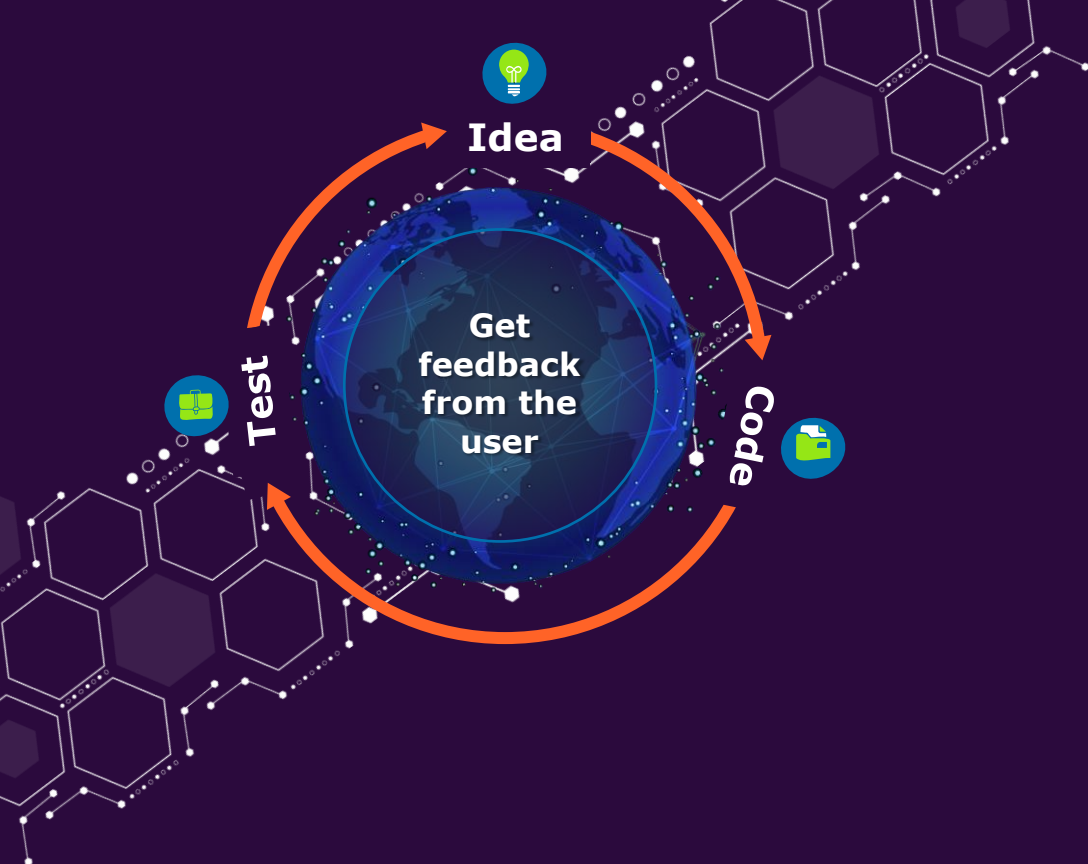
58 intents and 125 stories implemented

Provision of contact information of a suitable supporting organization for each problem, including regional contacts

Anonymization of chat sessions

9
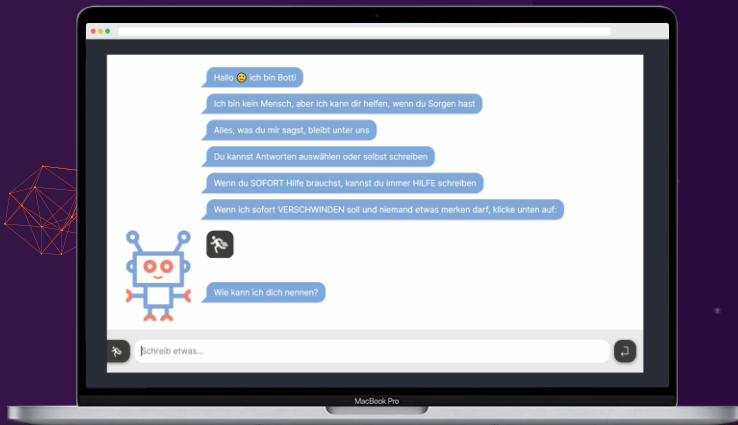
Inside the Botti MVP

It's all about the user...

Idea

Test

Code
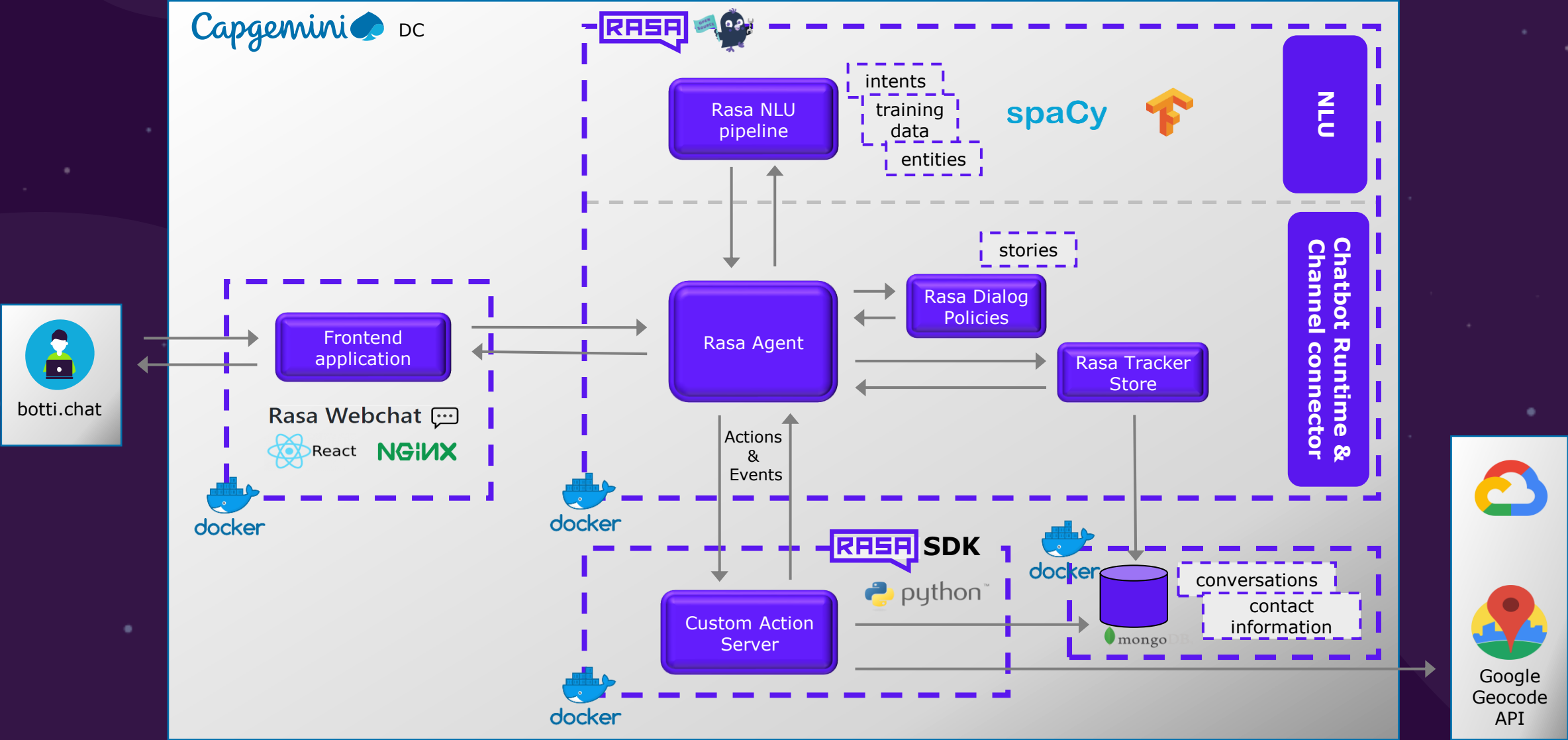
Get feedback from the user

Acceptance test with 366 students in the age group 6-18

70% of the students like the idea of Botti
76% of this group would recommend Botti
79% of the girls and **61%** of the boys would use Botti

Spelling mistakes are a big challenge, especially in the younger age group

Some answers of the bot are not suitable and Botti appears cold-hearted sometimes

Users want more information for their problem then just a single set of contact data

Hilfe fairMitteln e.V.

in https://bit.ly/39RG91i

✉ info@hilfefairmitteln.de
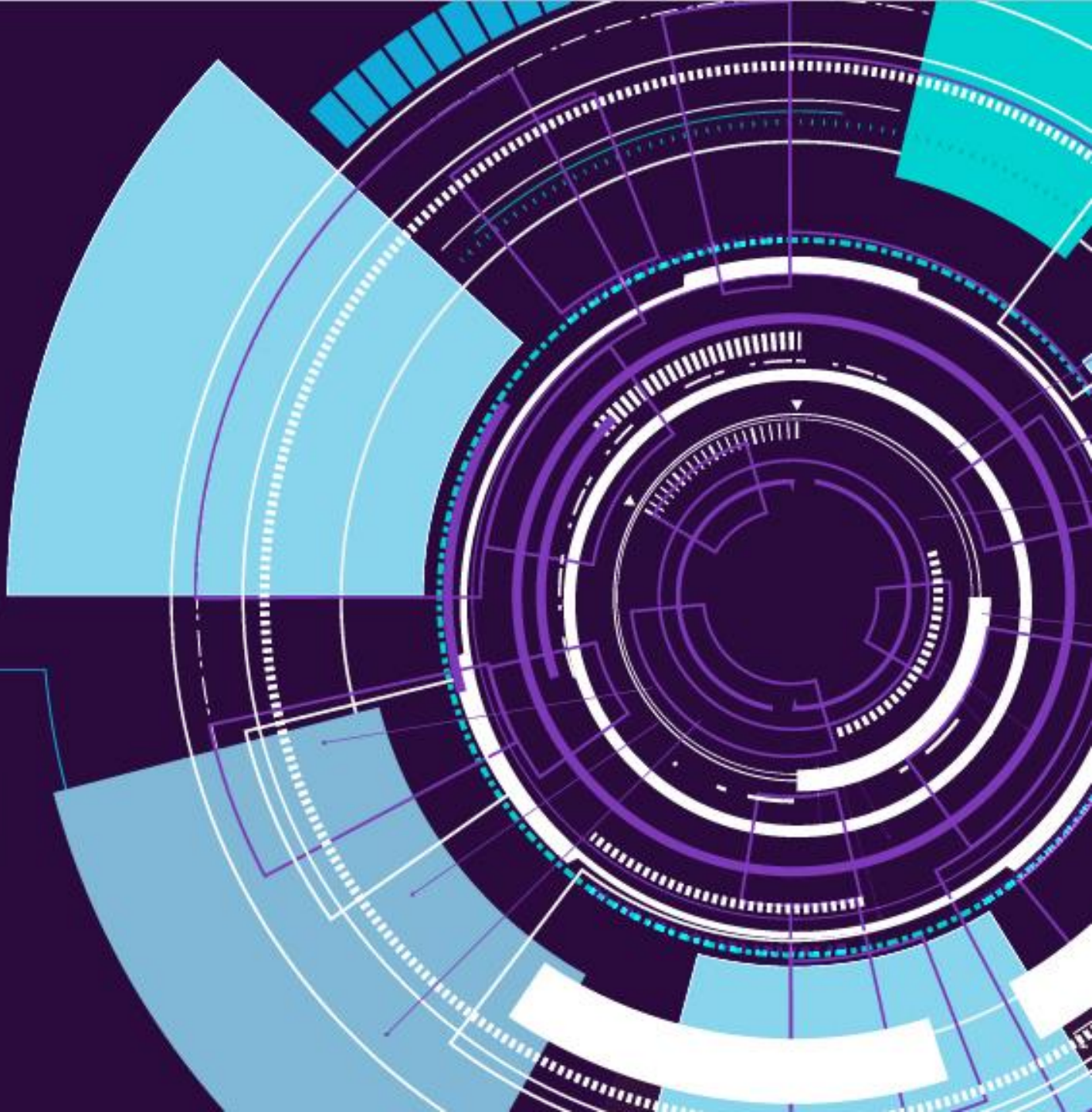
Abendveranstaltung mit Capgemini

Save the Date und sei bei unserem virtuellen Abendprogramm **am 11.02.2021 von 18:00 Uhr bis 20:00 Uhr** dabei.

Es erwartet dich unter anderem eine Keynote *„Coding at Capgemini – Revolution or Evolution for Clients"* von unserem **Head of Innovation Thilo Hermann**.

Erhalte spannende Einblicke und Beispiele, wie Capgemini seine Kunden revolutionär aber auch evolutionär mit Software unterstützt.

Schnapp dir außerdem einen Drink für ein ausgelassenes

Get-Together: lerne dabei unsere Bereiche kennen und vernetze dich mit Capgemini-Mitarbeitern.

Du hast Interesse?

Dann melde dich bis zum 11.02.2021 unter https://capgemini-events.de/abendveranstaltung_mit_capgemini/ an.

Wir freuen uns auf dich!

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