



*On the way to Autonomous Busses for Public
Transportation*

SCCL – Self controlled City Liner

*an Innovation Project for the City of Arbon
Switzerland*

Feasibility Study SCCL: 2019-2020

Initial requirements:

- Autonomous driving Shuttlebus on the route
 - Railway Station – Harbor – Castle – Saurer Museum – Swimming Bath – Hotel Römerhof – City Hall – Railway Station
- 7 Stops, Length around 2.2 km
- Every 30 minutes

What for?

- It connects
 - The Lake Promenade and the Old Town with the New Town
- It serves
 - the elderly population
 - the tourism
 - the cultural sites
 - the access to the offices of the city and to medical centers

Feasibility Study SCCL: 2019-2020

Initialization

- Technical Association Arbon (TGA)
 - Club of Engineers, Scientists and other technical interested persons
 - On the occasion of the Centennial (100 Years-Jubilee)

Main Project Partners

- TGA
- City of Arbon
- Eurobus (provider of public transportation)
- Postauto
- Arbon Energy
- LARAG

Presentation of Feasibility Study SCCL

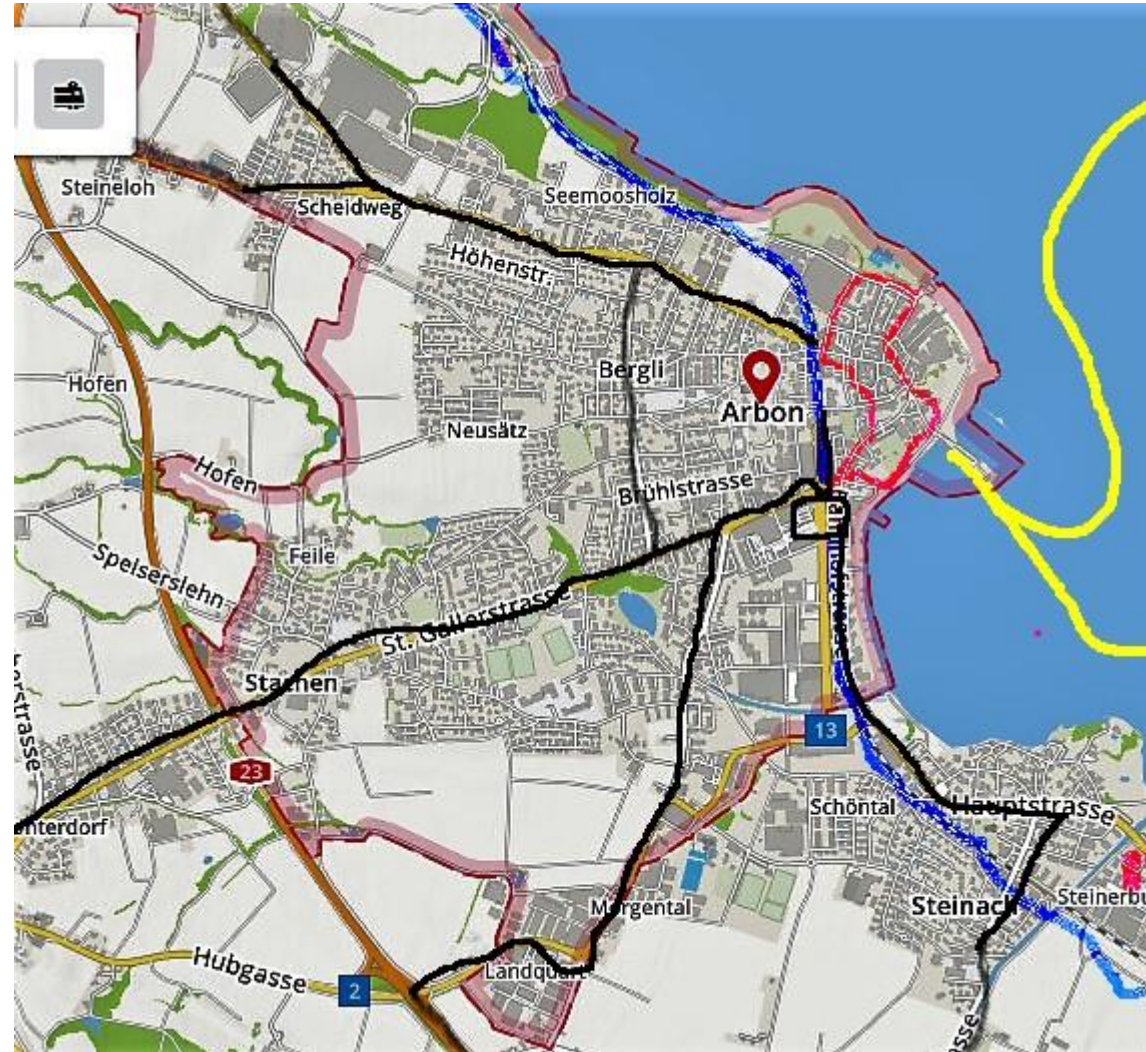
- July 7, 2020
- Route Lake Promenade – Old Town feasible: **Result positive!**



Connected to regional public transportation system

Overview public transportation System

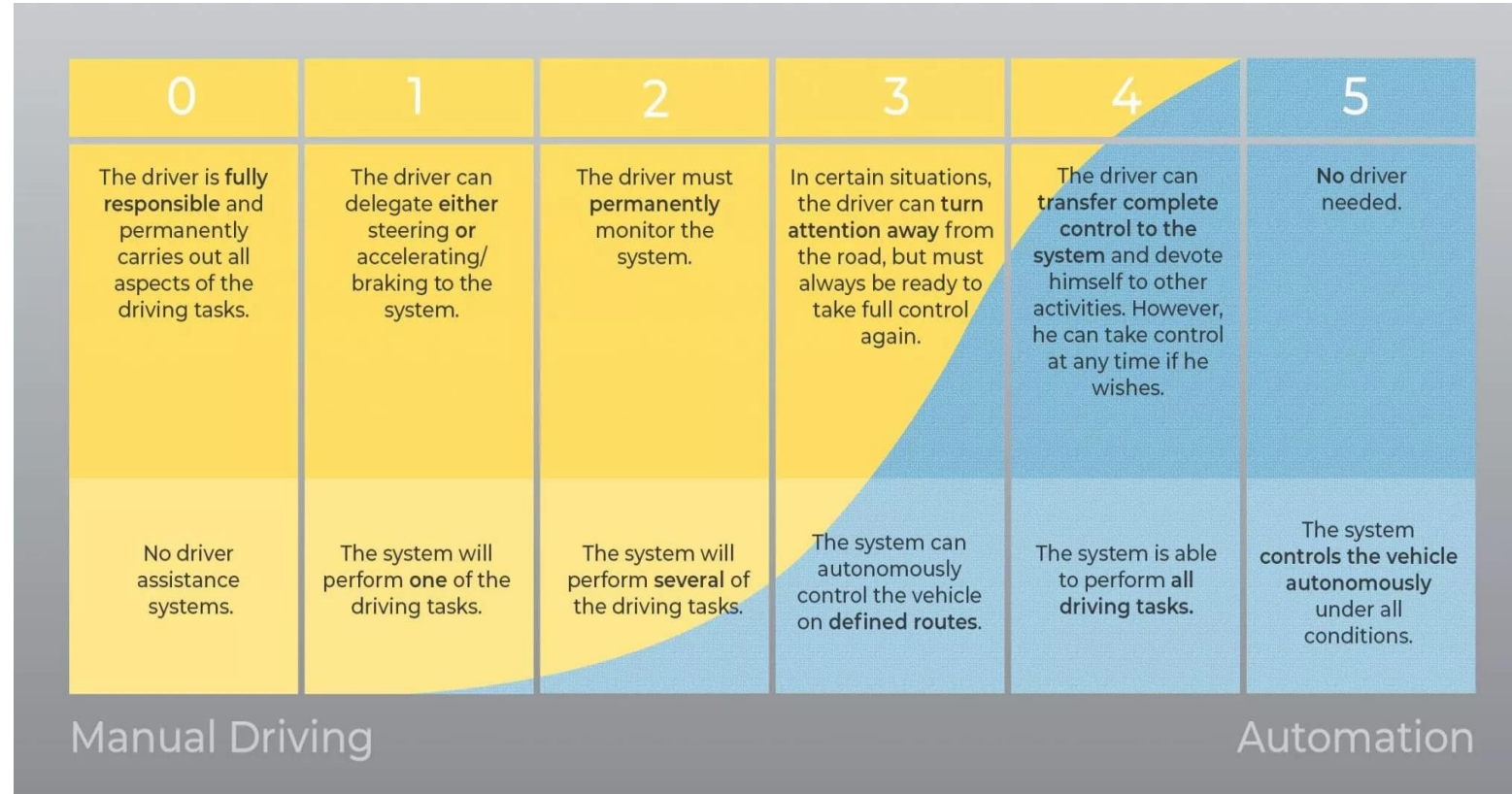
-  Hub: Railwaystation, Busterminal
- Train (along seaboarder)
- Regional Bus (Postauto, AOT)
- Ships on the lake of Constance
- **NEW: SCCL (old city)**



Realization SCCL 2022-2026

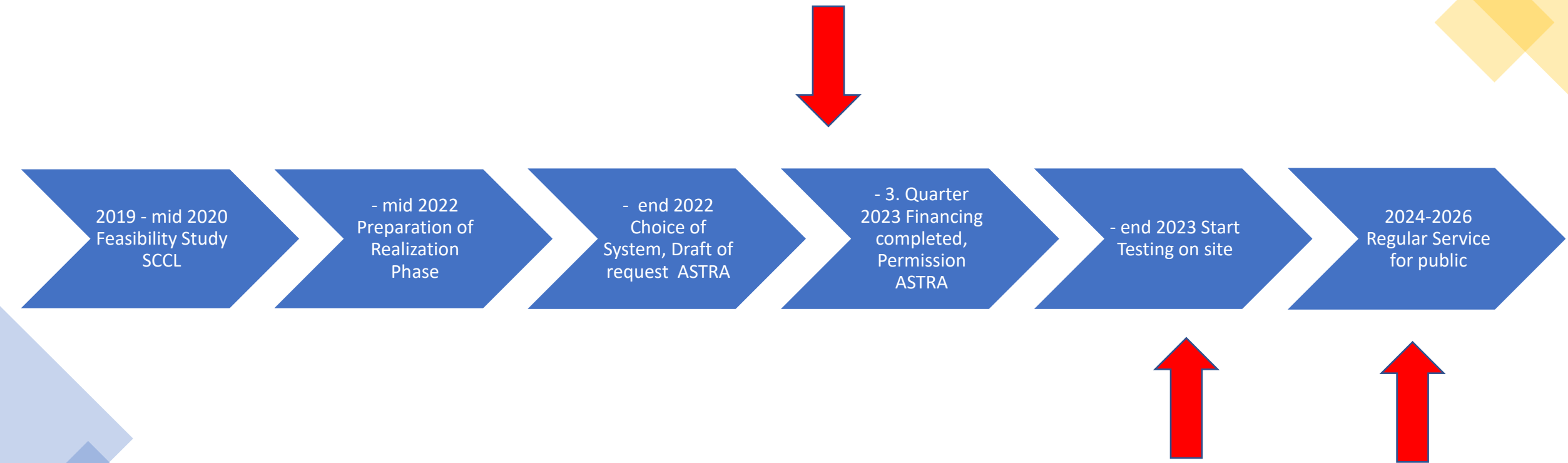
Legal Requirements

- As of Level 3 of Automatization: Exceptional Permission of ASTRA necessary, given for max. 3 years
- SCCL: Level 3 und 4+
- Request for the exceptional permission: complex and requires innovational elements



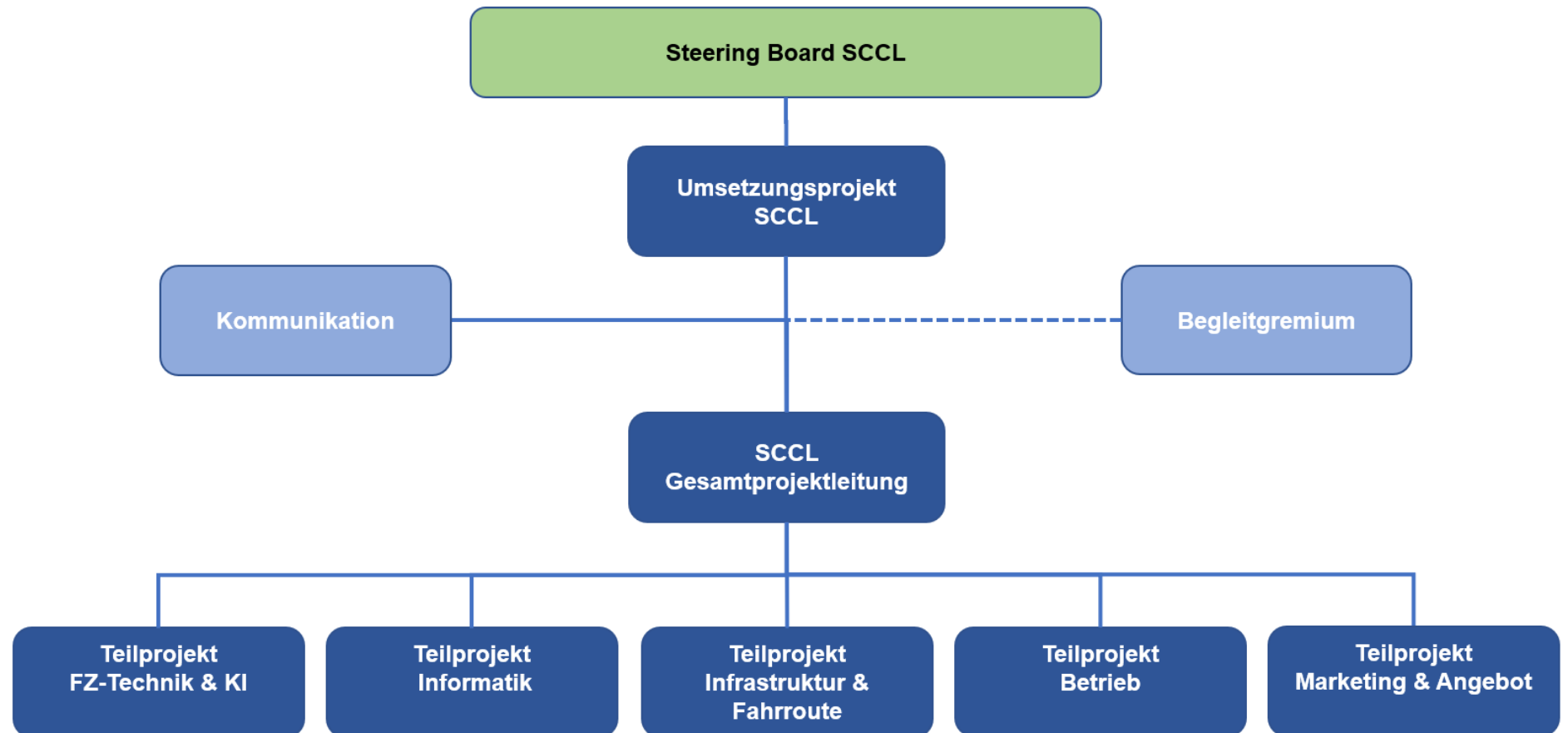
Realization SCCL 2022-2026

Timeline SCCL: Overview



Realization SCCL 2022-2026

Organisation SCCL / Teams



Realization SCCL 2022-2026

Choice of technical System for SCCL

Main requirements

- Minibus with Low Floor Entrance, > 12 seats, wheelchair place
- Power Train: electric, quiet
- Autonomous driving: all weather, all seasons
- Software for regular public service (later on demand)
- Remote control by traffic/fleet supervisor

Realization SCCL 2022-2026

Description of technical System for SCCL

- **Basic vehicle:** Minibus Altas Cityline LW (electric powered)
- **Drive by Wire:** Schaeffler by wire Technology or else
- **Sensor system:** Sensible4 (Cameras, Lidars, Radar)
- **Autonomous drive:** Sensible4 (Software Dawn and Hardware)

