



START Hack 2023 | City of St.Gallen

Nicola Wullschleger, Project Manager Smart City & Open Data

St.Gallen, March 22nd 2023



ABOUT

*We form the **CDO office** of the city
of St.Gallen*



Christian Geiger

- Chief Digital Officer (CDO)
- Politics and Administrative Science
- Open Data and Smart City activities
- Discord:



Nicola Wullschleger

- Project Manager Smart City and Open Data at City of St.Gallen
- Discord: OpenDataStGallen_Nicola



Laure Brem

- Intern Smart Government
- Discord:

*Case content expert at the
**waste disposal department
(ESG)***



Marc Maurhofer

- Responsible for waste logistics and waste consulting
- Responsible for the case content and its implementation

Availability and contact information during START Hack 2023



Availability

- Wednesday (9.30 pm – 1 am)
- Thursday (8 am – 10 pm)
- Friday (8 – 10 am)

Experts

- We take people from **Waste Disposal Department** into consideration via phone if questions cannot be answered directly.

Channel

- Please come directly to us, or contact us via **Discord**.
- Please don't use any other channels. Don't use the START Summit platform to get in touch with us.



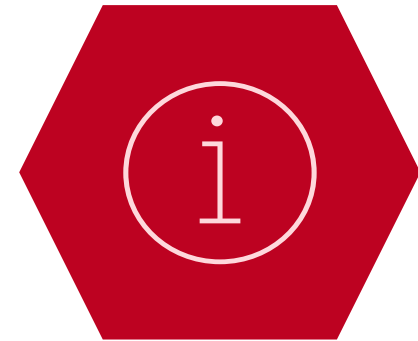
Source: International Students Committee, 2011, Wikipedia



Source: ANKAÜ, 2013, Wikipedia.



Source: Petar Marjanovic, 2007, Wikipedia



Source: Lurenz, 2013, Wikipedia

City of St.Gallen



Canton	St.Gallen
Spoken language	German
Inhabitants	81'615 (as of January 2023)
Organisational approach for SC Initiatives	<ul style="list-style-type: none">▪ SC as legislative target of city government for session 2017-2020▪ Steering committee for Smart City topics within the city administration (established 2017)▪ Chief Digital Officer within the city administration (established 2017)▪ Regional competence center for research, education and innovation ("Smart City Lab")
Digital Infrastructure and Layer	<ul style="list-style-type: none">▪ fully developed city-wide FTTH network, provided by municipal public services (2009-2019)▪ 4G infrastructure▪ selective LoRaWAN infrastructure within the city, provided by St.Galler Stadtwerke (sgsw)

START Hack 2023 | Deep Dive | 22.03.2023

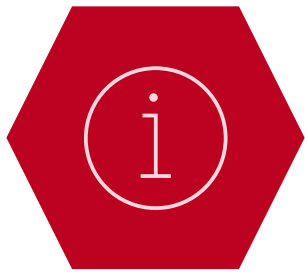
SMART CITY

Definition

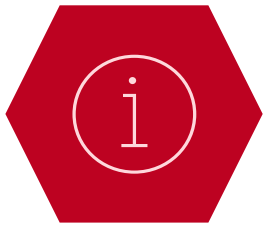
“In a smart city, technologies and data are linked to increase the **quality of life for residents** and the quality of location for businesses, while using less resources. Residents are an essential part of the developments and can develop, test and co-determine solutions for everyday life.”

St.Gallen, September 2018

Activities in a Smart City



Smart Government



Smart Governance

- Using the resources in a smart and efficient way, using technology to improve the existing services
- **Open & Linked Data:** Making data open and using data itself in order to create a data-driven government (Open Data Portal Canton & City of St.Gallen: daten.sg)

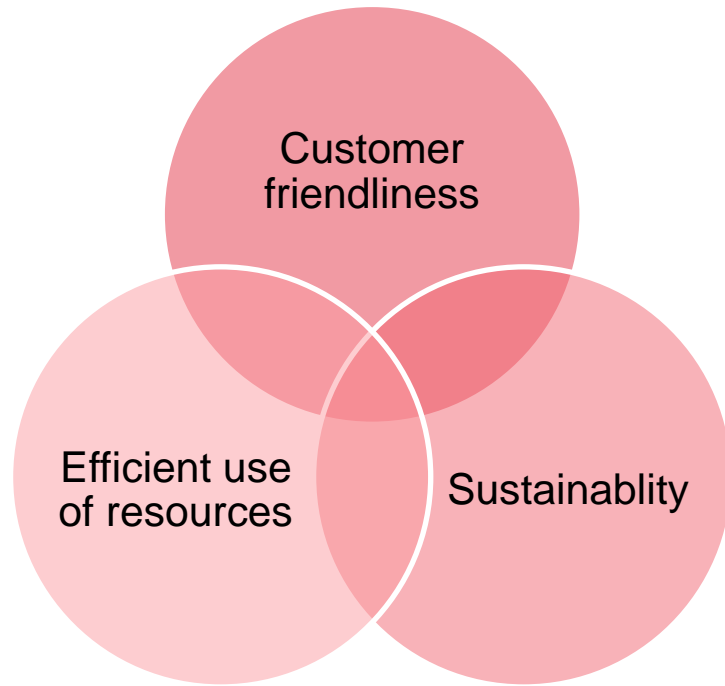
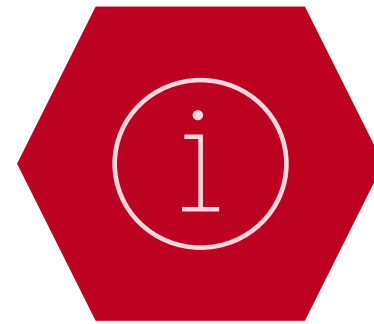
Digital Service & Collaborative Government

- Using participative methods, external knowledge in order to improve services and get insights from different perspectives.

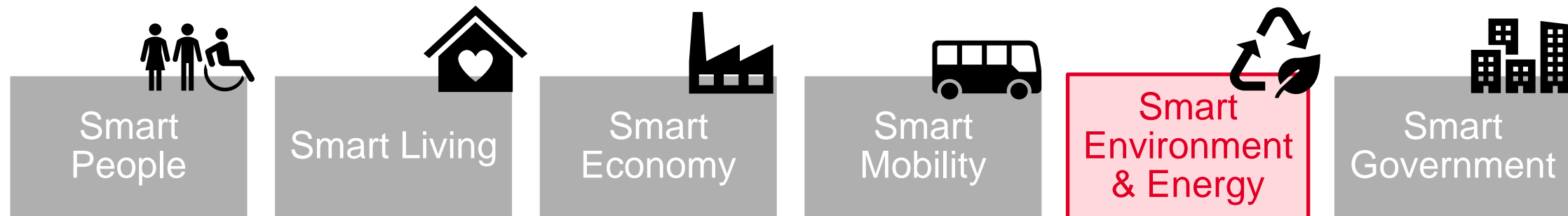
(City infrastructure)

- Providing an infrastructure that allows us to create smart projects in all other areas

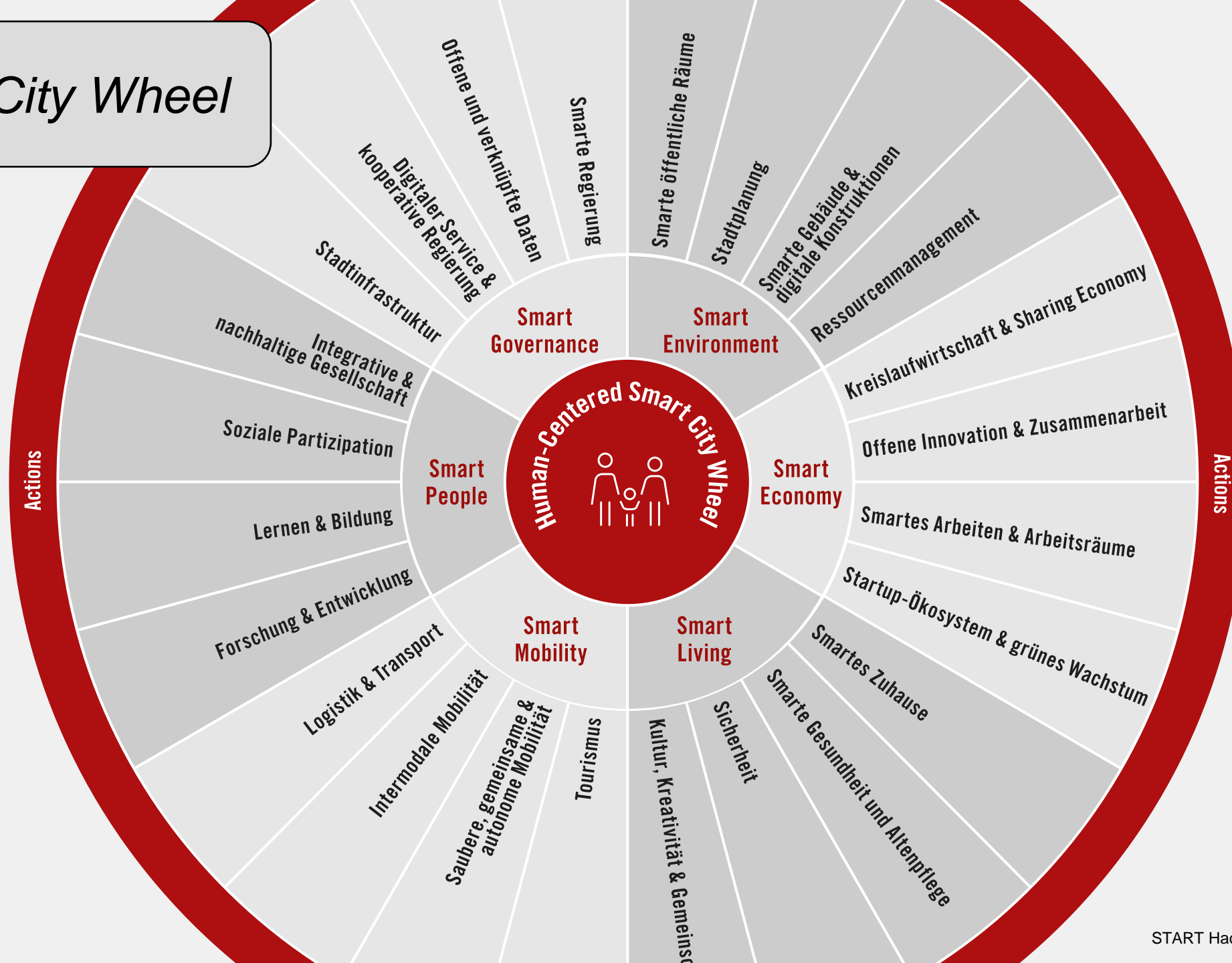
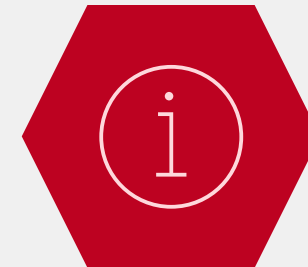
*What we are looking for in **our smart services**...*



...and in which fields are we looking to implement these factors



Smart City Wheel





Entsorgung St.Gallen

www.abfall.stadt.sg.ch
Telefon 071 224 50 50
esg.beratung@stadt.sg.ch

Datum:

8.3.2022

Warum wurde Ihr Kehrriech nicht mitgenommen?

- ☐ Kein offizieller Kehrriechsack
- ☐ Überfüllter Kehrriechsack
- ☐ Abfälle an den Kehrriechsack gebunden
- ☐ Abfälle sind nicht brennbar
- ☐ Elektroschrott
- ☒ Keine Sperrgutmarke/n
- ☐ Zuwenig Sperrgutmarken
- ☐ Gegenstand zu schwer, obwohl mit Marke/n

Bitte nehmen Sie die Abfälle zurück und stellen diese bei der nächsten Abfuhr korrekt bereit.

Wartung der Container und Überfüllung

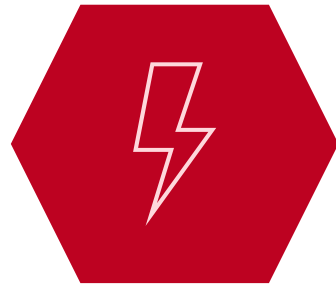
- ☐ Container überfüllt
- ☐ Fallschloss funktioniert nicht
- ☐ Container ist defekt:
 - ☐ Stützrad
 - ☐ Bremse
 - ☐ Deckel
 - ☐ Boden durchgerostet
 - ☐ Handgriffe defekt
- ☐ Container ist stark verschmutzt
- ☐ Kunde nicht bekannt, bitte anmelden
- ☐ Container nicht beschriftet

Bitte lassen Sie den Container reparieren oder reinigen. Melden Sie den Container an oder beschriften Sie ihn richtig.

Some services offer room for improvement...

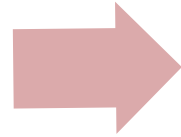


Customer friendliness, sustainability & the efficient use of resources are hardly guaranteed in the process of bulky waste disposal



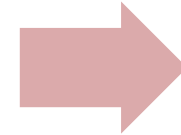
Disposal

- Purchase of specific bulky waste stamps ⚡
- Items can be left on the doorstep



Collection

- Disposal trucks collect them together with regular trash bags
- Frequent cases of illegal waste disposal ⚡



Incineration

- Bulky waste is always burned in incineration plants
- Regardless of its condition / usability ⚡

*Improving the **the bulky waste disposal process** while considering two dimensions*



Customer-friendly bulky waste disposal

- Quality of information on bulky waste disposal
- Improving the accessibility of waste stamps
- Easier payment for waste disposal
- Opportunity for Re-Use- and Sharing-Concepts

Process optimization in the waste disposal unit

- Saving human resources
 - in support hotline
 - In fighting illegal waste disposals
- Providing concepts for keeping usable items in the life-cycle
- Keeping the city clean from illegal waste



Sustainable practices





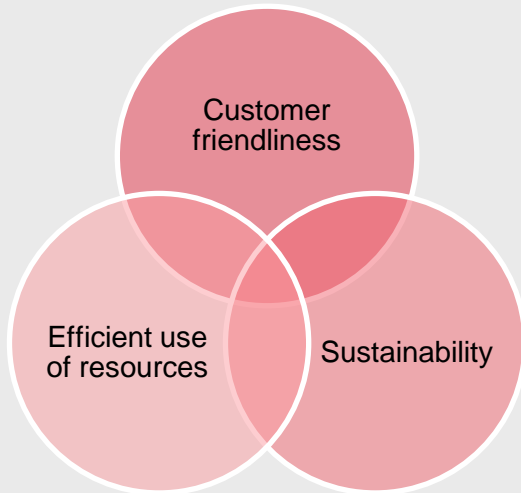
YOUR CHALLENGE

Your Mission

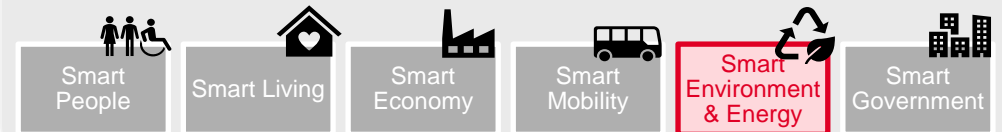
*Proposing innovative and smart solutions to optimize the process of bulky waste disposal for the **population** as well as the **administration***



By addressing one or multiple aspects



and ultimately work towards a smarter city!



What are you working with?

Resources handed out to participants only

- Statistics on bulky waste stamp sales
- Statistics on bulky waste stamp usage and misuse (illegal waste disposal)
- Points of illegal waste disposal
- Waste collection routes as geographic data
- Pick up points on waste collection routes

Open data resources

- [Points of sale of bulky waste stamps](#)
- [Waste statistics](#)
- [Waste bins \(underground\) for trash](#)
- [Recycling points \(glass, cans, etc.\)](#)
- [Statistical population data in machine readable format](#)

Further (open) information

- <https://opendata.swiss/de>
- <https://daten.sg.ch/>
- German: [Abfallarten | stadt.sg.ch](#)
- Other languages: [Abfallinformationen für Fremdsprachige | stadt.sg.ch](#)

We will **judge** your solutions according to the following **criteria...**

START Hack Criteria

Complexity & Technical Sophistication

- Usage of appropriate services and technologies

Design

- Usability of the solution

Viability

- Possibility of realizing the solution

Feasibility

- Maturity Level of the developed solution

Creativity & Innovation

- Surprise effect to the jury

Presentation

- Communication of the developed solution

St.Gallen Criteria

Usefulness of your solution

- The case is a real world challenge that we start tackling this year.
The more useful it is for us, the better!
- Because the processes within the waste disposal department are intertwined and thus a reconstruction of the entire waste disposal issue is difficult, the solution should primarily focus on usefulness and customer friendliness for the population

