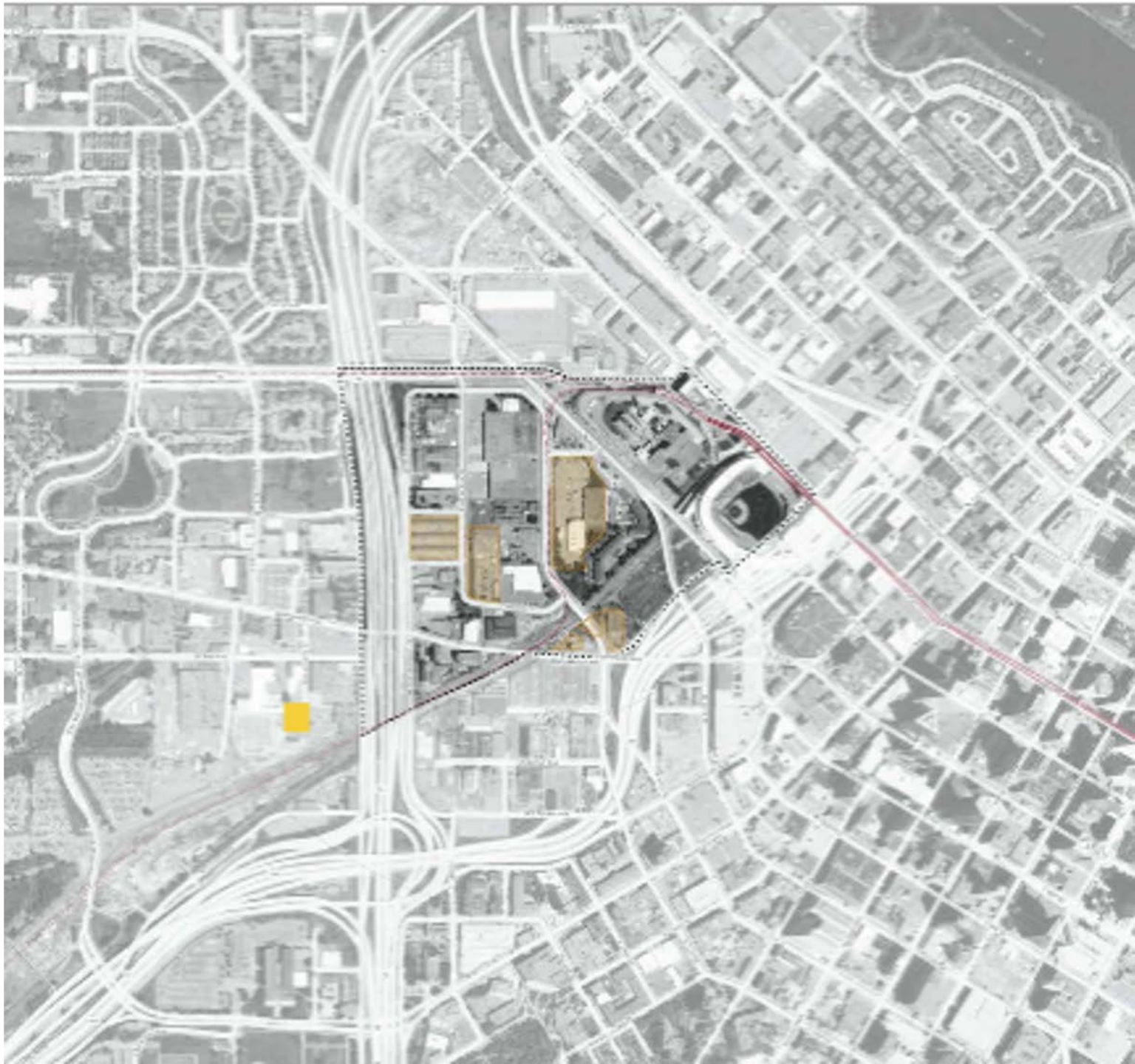
Root District

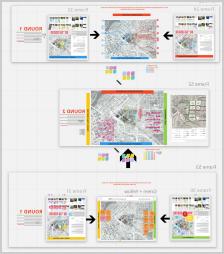
art.food.culture.

2021 Root District IGC

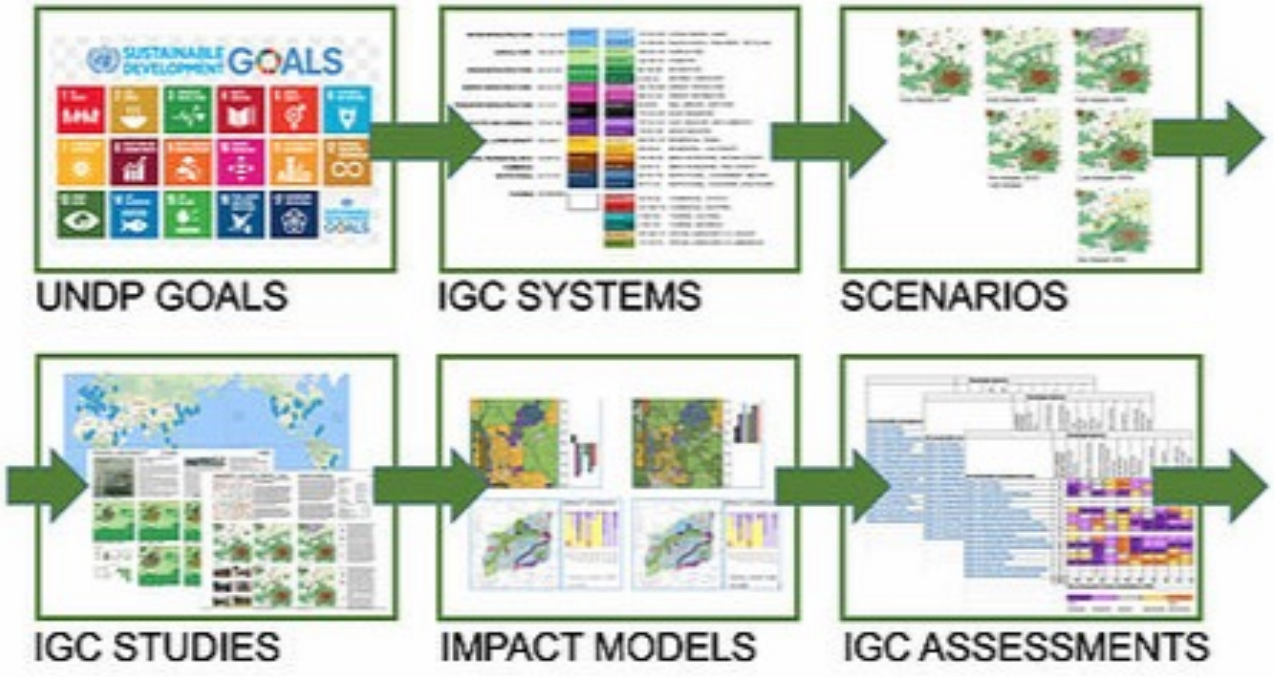
International Geodesign Collaborative

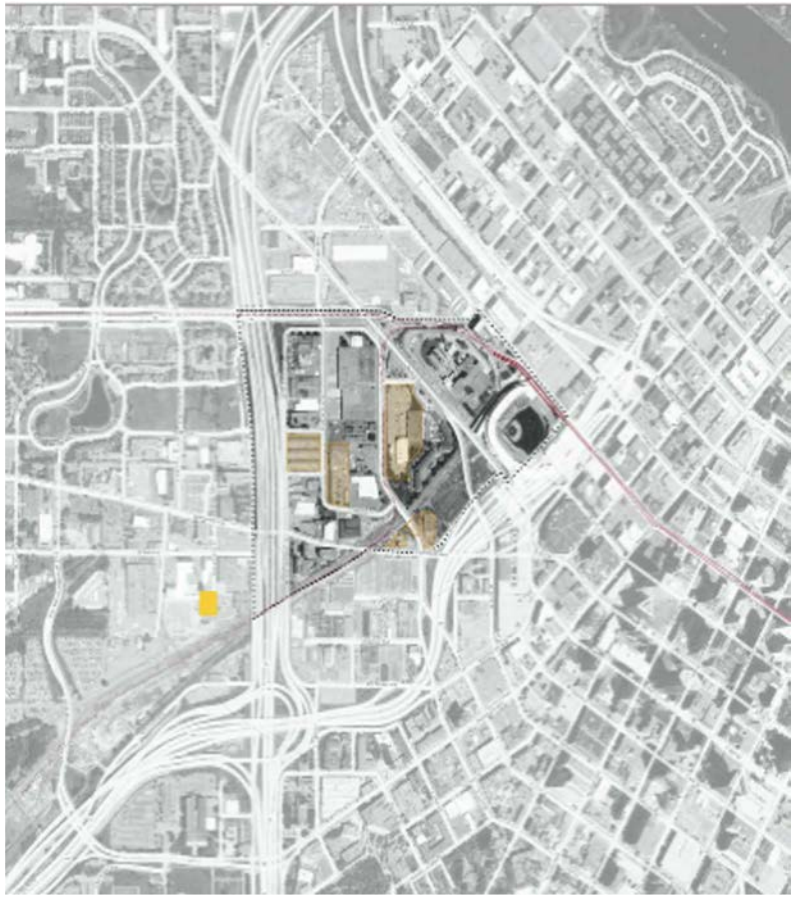
Tom Fisher
Tim Griffin
Minnesota Design Center
26 May 2021



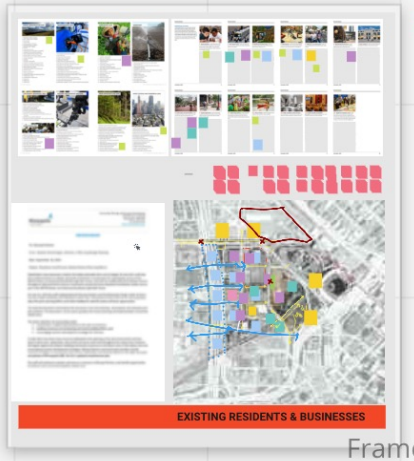
Date	Item	Participants
March 23, 2021	Community Engagement Task Force Meeting	CETF
March 24, 2021	Leadership Roundtable Introduction	Leadership Roundtable
March 2021	Working Group Invitations	Dan and working group leads
April 14, 2021	**Workshop #1** **Goals + Innovations** • Introduce UN Sustainable Development Goals, 2040 Comp Plan Goals, IGC Regenerative Design Innovations • 4 POV Break Out Groups list goals and place innovations on Root District Maps • Report out 4 POV Visions **2 hours**	4 POV Teams 
Late April, 20	MDC illustrates 4 POV Visions and loads all projects and policies selected in the voting matrix.	MDC
May 12, 2021	**Workshop #2** **POV Visions +Consensus Projects** • Present POV Visions and Projects and Policies Matrix • 4 POV Break Out Groups Negotiate Short and Long Term Projects and Policies • Report out consensus Short and Long Term Projects and Policies **2 hours**	4 POV Teams 
Early May, 2021	MDC illustrates consensus Short and Long Term Projects and Policies	MDC
May 25, 2021	**Draft Recommendations Review 1 hour**	4 POV Teams and Working Groups
June 15, 2021	IGC Submittal of outcome	MDC
June 18-19	2021 IGC Summit	All invited virtually

Prepared March 25, 2021
Revised April 21, 2021

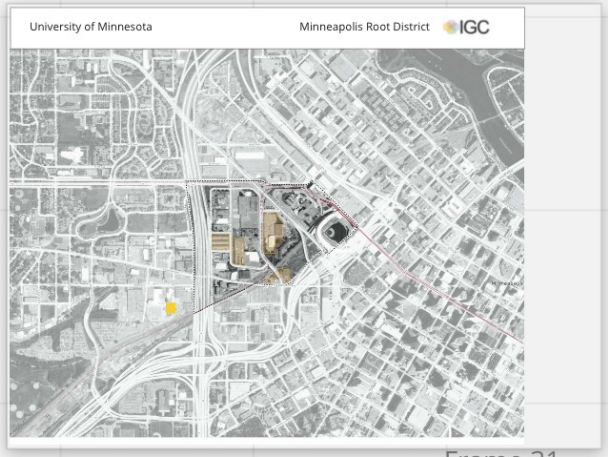




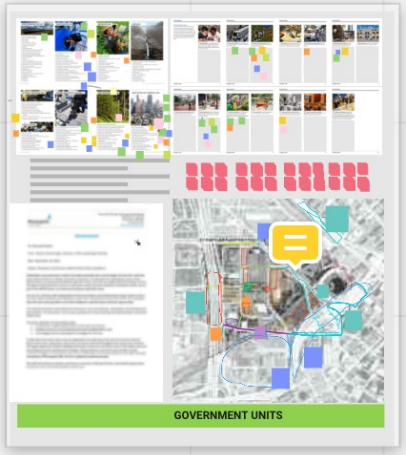
"Geodesign" *was invented to describe the concept of a progressive framework that brings geographic analysis into the design process. Here, initial design sketches are instantly vetted for suitability against a myriad of data base layers describing a variety of physical and social factors for the spatial extent of the project.*



Frame 33

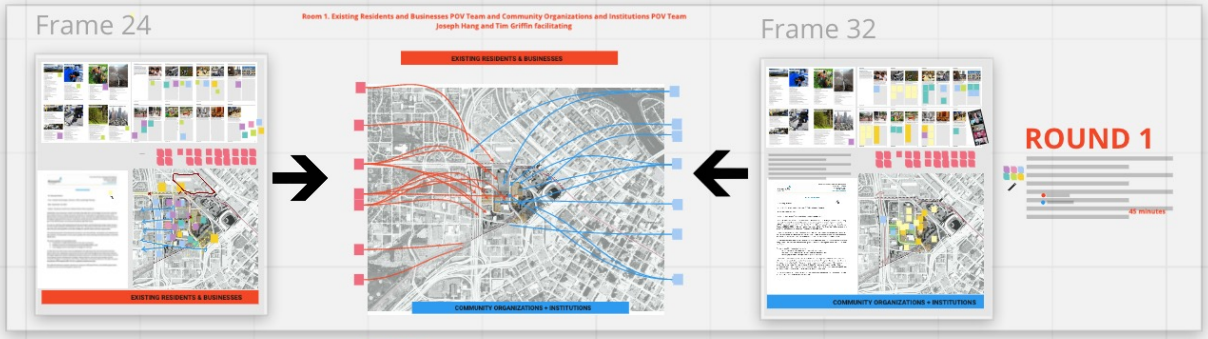


Frame 30



Frame 31

Frame 24



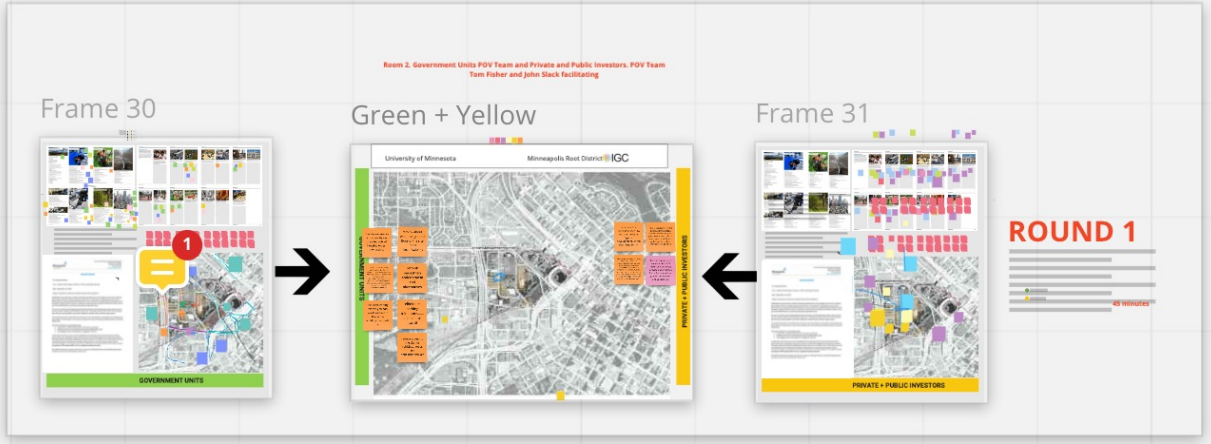
Frame 32

ROUND 1

Frame 52

ROUND 2

Frame 53

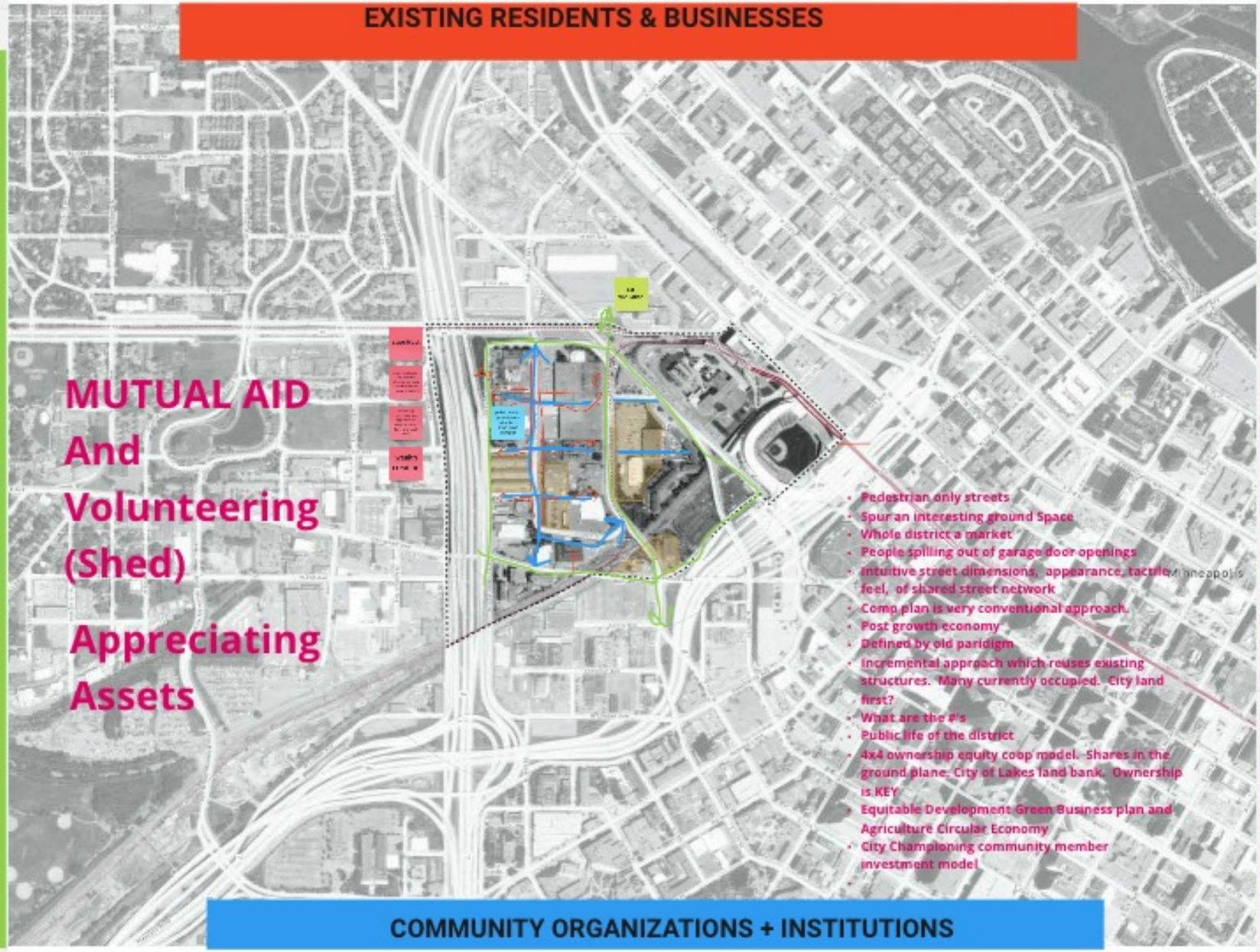


ROUND 1

IGC

EXISTING RESIDENTS & BUSINESSES

GOVERNMENT UNITS



COMMUNITY ORGANIZATIONS + INSTITUTIONS

PRIVATE + PUBLIC INVESTORS

ROUND 2

INSTRUCTIONS

- Room 1 and Room 2 consensus results note similar projects and policies. 10 minutes
  Move post it notes on to the final consensus board and add graphic notations and features.
- Discuss remaining projects and policies and determine which ones should be moved to the consensus board as well. 20 minutes
  (Note EARLY ACTION projects and policies with POV color dots)
  - [EXTG RES & BUS]
  - [COMM ORGS & INST]
  - [GOVT UNITS]
  - [INVESTORS]
- 4 POV Team Reps report out, then ALL discuss consensus short term and longer term projects and policies. 15 minutes

45 minutes

University of Minnesota - USA

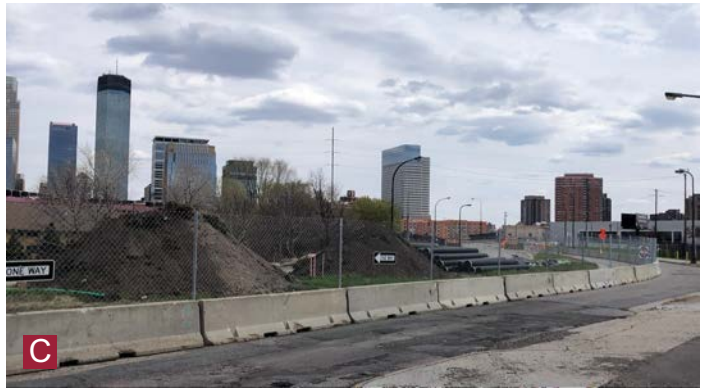
Root District and Minneapolis 2040

The Root District is an industrial area next to downtown Minneapolis that houses the city's farmer's market and that will soon have a light-rail station stop, which will greatly increase land values and development pressures. It presents an opportunity to showcase a more equitable, affordable, and sustainable approach to urban development, with the city owning over 30% of the land and with no permanent residents.

The City of Minneapolis also recently completed its comprehensive plan – Minneapolis 2040 – and the Root District offers an opportunity to demonstrate how new development can help the city achieve the goals set out in that plan. Those goals revolve around eliminating disparities, increasing economic opportunity, responding to climate change, and respecting the ethnic and cultural diversity of the city.

The Root District's development will link the city's comp-plan goals with the U.N.'s Sustainable Development Goals, while also addressing the carbon-sequestration goals of the Trillion Trees Project.

The Root District has almost 33 acres of developable land immediately west of downtown Minneapolis, with a light-rail station at its center and with north-south and east-west highways along two of its borders. A new professional baseball stadium and a major energy recovery plant stand at along its northeastern edge.



University of Minnesota - USA

Requirements

- Eliminate disparities in wealth and opportunities
- Ensure that everyone benefits from growth
- Provide affordable and accessible housing
- Create living-wage jobs for all residents
- Help residents be healthy, safe, and connected
- Design a high-quality physical environment
- Respect the city's diverse history and cultures
- Enhance the city's cultural and natural assets
- Provide walkable and bikeable neighborhoods
- Work toward climate-change resilience
- Protect and enhance a clean environment
- Build a healthy, sustainable, diverse economy

Root District and Minneapolis 2040

IGC

Innovations

- AGR 11 Urban agriculture
- AGR 12 Rooftop gardening
- AGR 18 Controlled environment agriculture
- ENE 1 Renewable energy sources
- GRN 11 Daylighting lost streams and rivers
- GRN 12 Green Roofs
- INS 11 Diversifications in entertainment venues
- INS 12 Accommodating street festivals
- MIX 1 Mixed use development
- MIX 7 The sharing economy
- MIX 8 Future office workspace
- MIX 12 Innovation districts
- MIX 14 Compact sustainable neighborhoods
- RES 11 Affordable modular housing
- TRA 13, 14 Bike sharing
- TRA 20 Permeable paving for UHI & stormwater
- WAT 3 Agricultural water conservation

University of Minnesota - USA

Root District and Minneapolis 2040

Location Map

Current 2021

Early Adopter 2035

Early Adopter 2050

The Root District is part of a larger community planning and engagement process, led by a communityorganizationcalledtheNuLoopPartners. With the Minnesota Design Center at the University of Minnesota, NuLoop led two IGC workshops that had four working groups that represented the existing residents and businesses, community organizations and institutions, government units, and public and private investors.

Each group identified the Minneapolis 2040 goals and the IGC innovations that they thought were most important. In the second workshop, the four teams paired into two groups, negotiating among their priorities, and then those two came together to agree on a consensus plan that looked at early, late, and non-adopter scenarios for the years 2035 and 2050.

Late Adopter 2035

Late Adopter 2050

- Water Infrastructure
- Agriculture
- Green Infrastructure
- Energy Infrastructure
- Transportation Infrastructure
- Industry and Commerce
- Institutional
- Residential, Mixed (Medium)
- Residential, Mixed (High)
- Tourism

Non - Adopter 2050

The early adopter scenario has tree-lined streets, a central green space, and mixed-use development, with incubator market stalls on the ground level and under the highway. By 2050, most streets are pedestrian only, and the highway is gone, replaced by urban agriculture and a food-market district extending west to a residential area.

The late adopter scenario continues to have industrial uses and some new mixed-use as well as high-density development by 2035. By 2050,there is more high-density development along the highway, with a central green space and a woonerf. The tree-lined streets continue to accommodate vehicles as well as pedestrians and bicyclists.

The non-adopter scenario has the entire district filled with high-density, market-rate development by 2050. Highrise buildings on top of parking decks line vehicular-oriented streets, with no open space apart from the existing outdoor food market. The only trees exist along the transitway and the existing bike path. The highway remains in place.

University of Minnesota - USA

Root District and Minneapolis 2040

IGC

Current 2021											
SDG	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	1	0	0	0	1	0	1	0	0	3
9	0	1	0	0	0	1	0	0	0	0	2
10	0	0	0	0	1	1	0	1	0	0	3
11	0	0	0	0	0	0	0	1	0	0	1
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	1	3	0	3	0	0	9

Current 2021

Early Adopter 2035											
SDG	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	1	1	1	1	1	0	1	1	1	8
2	0	1	0	0	0	0	0	0	0	1	2
3	1	1	1	1	1	1	0	1	0	1	8
4	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0	1	1
6	1	1	1	1	1	1	1	1	0	1	9
7	1	1	1	1	1	0	1	1	0	1	8
8	0	3	3	1	3	1	1	0	1	1	14
9	1	3	3	1	3	1	1	1	0	1	15
10	1	3	3	1	3	1	1	1	1	1	16
11	1	1	1	1	1	1	1	1	1	1	10
12	0	1	1	1	0	1	0	1	0	1	6
13	1	3	3	1	0	1	1	1	0	1	12
14	0	0	0	0	0	0	0	0	0	0	0
15	1	1	1	1	1	1	1	1	1	1	10
16	0	0	0	0	0	0	0	0	0	0	0
17	1	1	1	1	1	1	1	1	0	1	9
	9	21	20	12	16	11	9	11	5	15	129

Early Adopter 2035

Early Adopter 2050											
SDG	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	3	3	1	3	1	0	1	1	3	16
2	0	3	0	0	0	0	0	0	0	1	4
3	1	3	3	1	1	1	0	1	0	3	14
4	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0	1	1
6	3	3	3	3	1	1	3	1	0	3	21
7	3	3	3	3	1	0	3	3	0	3	22
8	0	3	3	1	3	3	3	0	1	3	20
9	1	3	3	3	3	3	1	1	0	3	21
10	3	3	3	1	3	1	1	3	1	3	22
11	3	3	3	3	3	3	3	3	1	3	28
12	0	3	3	1	0	1	0	1	0	3	12
13	1	3	3	3	0	1	1	1	0	1	14
14	0	0	0	0	0	0	0	0	0	0	0
15	1	1	3	1	1	1	1	1	1	1	12
16	0	0	0	0	0	0	0	0	0	0	0
17	1	1	1	1	1	1	1	1	0	3	11
	17	35	34	22	20	17	17	17	5	35	219

Early Adopter 2035

Sustainable Development Goals
1: No Poverty
2: Zero Hunger
3: Good Health and Well-being
4: Quality Education
5: Gender Equality
6: Clean Water and Sanitation
7: Affordable and Clean Energy
8: Decent Work and Economic Growth
9: Industry, Innovation and Infrastructure
10: Reduced Inequality
11: Sustainable Cities and Communities
12: Responsible Consumption and Production
13: Climate Action
14: Life Below Water
15: Life on Land
16: Peace and Justice Strong Institutions
17: Partnerships to achieve the Goal
Most benefit / Benefit / Neutral / Detriment / Most detriment

Late Adopter 2035											
SDG	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	0	0	0	1	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	1	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	1	0	0	0	0	0	1
7	0	0	0	0	1	0	0	0	0	0	1
8	0	1	0	0	1	1	0	1	0	0	4
9	0	1	0	0	1	1	0	0	0	0	3
10	0	0	0	0	1	1	0	1	0	0	3
11	0	0	0	0	1	0	0	1	0	0	2
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	1	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	1	0	0	0	0	0	1
	0	2	0	0	10	3	0	3	0	0	18

Late Adopter 2035

Late Adopter 2050											
SDG	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	3	3	1	3	1	0	1	1	1	14
2	0	1	0	0	0	0	0	0	0	1	2
3	1	3	1	1	1	1	0	1	0	1	10
4	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0	1	1
6	1	1	1	1	1	0	1	1	0	1	8
7	1	1	1	1	1	0	1	1	0	1	8
8	0	3	1	3	1	1	1	0	1	3	14
9	1	1	1	1	1	1	0	1	0	3	10
10	1	3	3	3	3	1	1	1	1	3	20
11	1	3	3	3	3	1	1	1	1	3	20
12	0	1	1	1	0	0	0	1	0	1	5
13	1	1	1	1	0	0	0	0	0	1	5
14	0	0	0	0	0	0	0	0	0	0	0
15	1	1	1	1	1	1	1	1	1	1	10
16	0	0	0	0	0	0	0	0	0	0	0
17	1	1	1	1	1	1	1	1	0	1	9
	9	23	18	18	16	8	7	10	5	23	137

Late Adopter 2035

Non - Adopter											
SDG	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	0	1	1	3	1	0	1	1	1	9
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	1	1	1	0	1	0	1	6
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	1	0	1	1	1	0	1	1	0	0	6
7	1	0	1	1	1	0	1	1	0	0	6
8	0	0	1	1	1	1	1	0	1	1	7
9	1	0	1	1	1	1	0	1	0	0	6
10	1	0	1	1	3	1	1	3	1	1	13
11	1	0	1	1	3	1	1	3	1	1	13
12	0	0	1	1	0	0	0	1	0	1	4
13	1	0	1	1	0	0	0	0	0	1	4
14	0	0	0	0	0	0	0	0	0	0	0
15	1	0	1	1	1	1	1	1	1	1	9
16	0	0	0	0	0	0	0	0	0	0	0
17	1	0	1	1	1	1	1	1	0	1	8
	8	0	12	12	16	8	7	14	5	9	91

Non - Adopter 2050

Early Adopter SDG

By 2035, the increased transit capacity and expansion of food-related incubator space increases economic opportunities and food access for underserved communities, while renewable energy systems address climate change. By 2050, those trends continue, as food-related businesses grow, carbon sequestration increases, and mixed-income housing becomes widespread. The district attracts tourists as a model of equitable, sustainable development.

Late Adopter SDG

By 2035, the district advances few SDG goals beyond offering more affordable, accessible transportation infrastructure and some new housing and industrial jobs. By 2050, the increase in mixed-use and mixed-income development reduces inequality and expands sustainability efforts in urban agriculture, renewable energy, and electrified transportation. The district also becomes a popular tourism destination for people interested in locally grown food.

Non - Adopter SDG

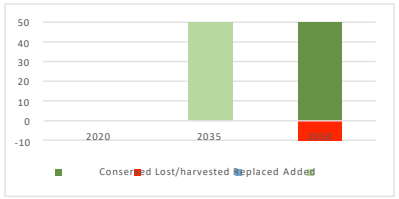
By 2050, with the current pattern of gentrification and high-end development filling the district, there are modest increases in the number of jobs, in more energy efficient buildings, in mixed-use land uses, and in food-related retail. The only area of significant improvement involves transportation, as the district becomes well served by public transit and as its high-rise buildings greatly increase the residential and commercial density of the area.

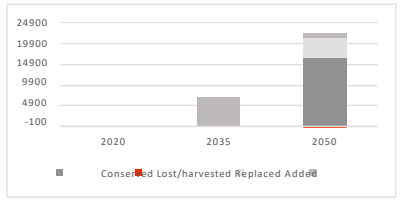
University of Minnesota - USA

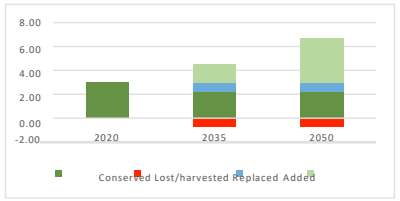
Root District and Minneapolis 2040

Project - Level Assessment

Project Tree Numbers | Project Carbon Capture | National Scale Trees | Carbon Per Capita

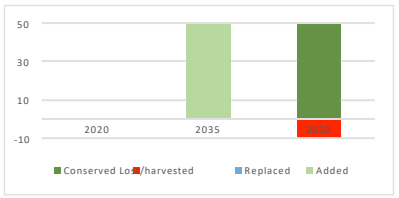


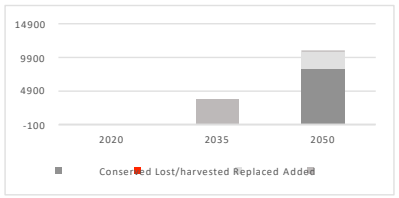


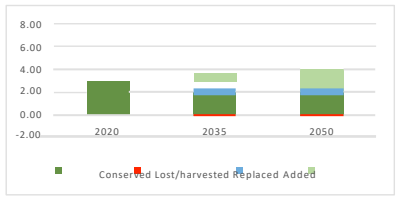


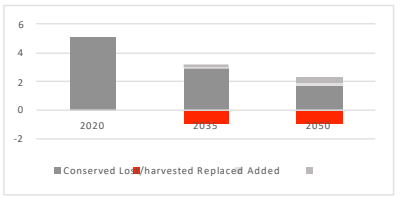
Early Adopter

The early adopter scenario has 2,000 trees planted by 2035 and another 250 by 2050, sequestering 22,290 kg of carbon annually. The national figures assume 1 million acres of equivalent urban industrial land in the U.S.



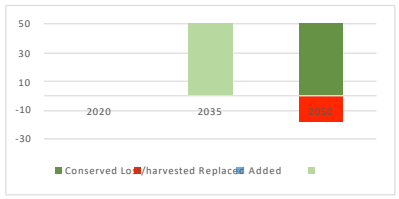


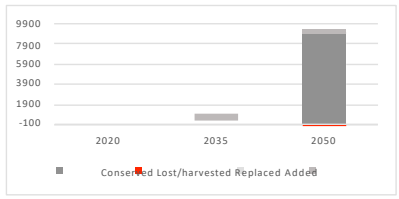


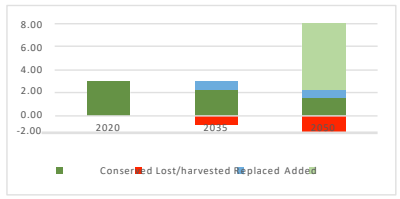


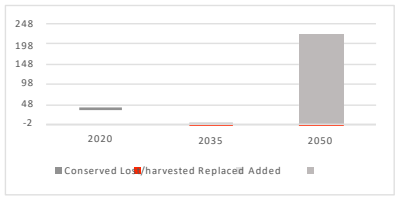
Late Adopter

The late adopter scenario has 1,000 trees planted by 2035 and another 30 by 2050, in a district that has no trees currently. This sequesters less than half of the carbon than the early adopter scenario.









Non-Adopter

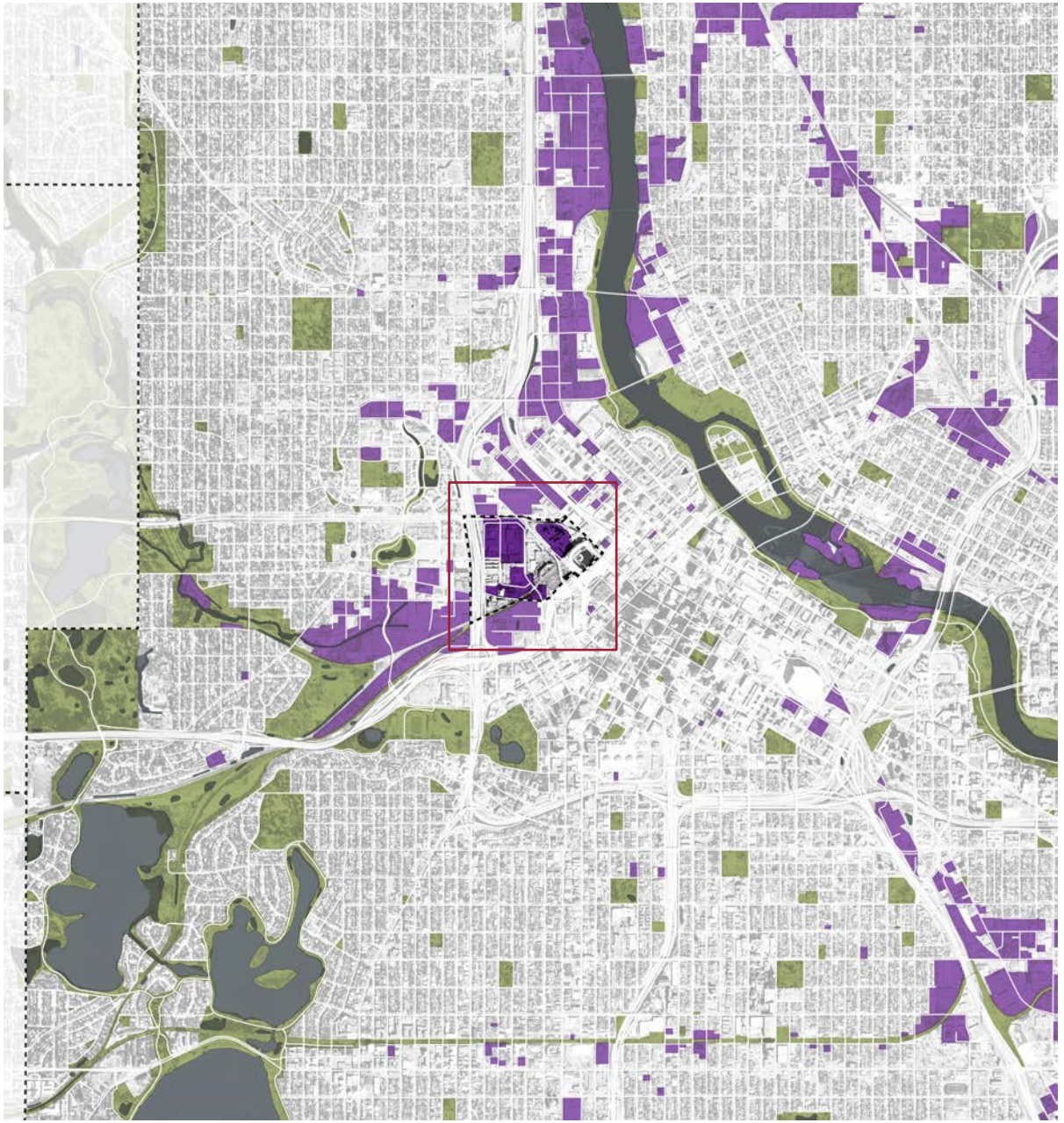
The non-adopter scenario has trees planted only along the transitway, for a total of 400 trees by 2035 and another 80 by 2050. As those trees mature, carbon sequestration also increases, but at a much lower level.

University of Minnesota - USA

Root District and Minneapolis 2040

Method

The project resulted from a partnership between the Minnesota Design Center (MDC) and the city, community representatives, property owners, and the design and development community. The ideas emerged from two Geodesign workshops and the maps, calculations, and 3D drawings were done by a team of MDC staff and undergraduate architecture students during April and May, 2021. We used ArcGIS Pro, Adobe Creative Suite, Rhinoceros 3D, and SketchUp software, working remotely. While there was a lot of agreement about the future of the district among the various voices in the workshops, translating that into maps and the images here were done by the MDC team.

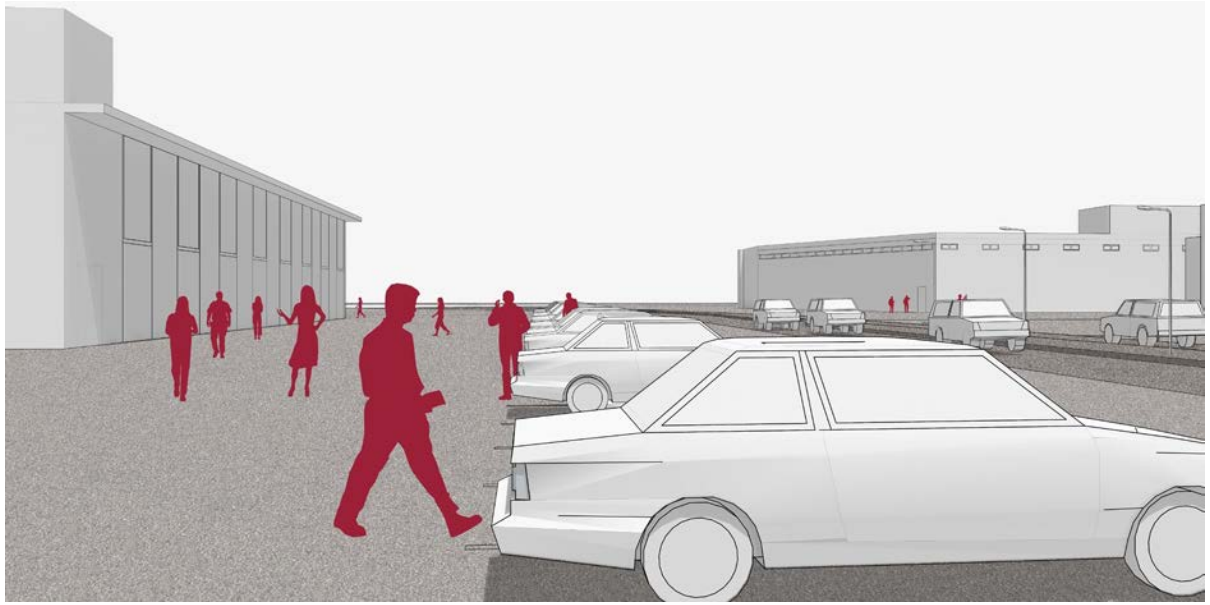


Current 2021 - Regional Opportunity Map

University of Minnesota - USA

Root District and Minneapolis 2040

IGC



Current 2021

Late Adopter 2050

Early Adopter 2050

Non - Adopter

University of Minnesota - USA

Project Participants

- Minnesota Design Center (MDC)
  Tom Fisher (Facilitator), Tim Griffin (Facilitator), Joseph Hang (Facilitator), Chon Fai Kuok, and Jason Xiong
- Root District Workshop Participants
  Lisa Austin, Fernando Burga, Dan Collison (Facilitator), Antonia Eboreime, Jeremiah Ellison, McKenzie Erickson, Tom Erickson, D'andre Gordon, Dani Hans, Doug Harvey, Christian Huelsman, Jamil Ford, Buacaya Bistreauz Joao, Ryan Kelley, Nick Koch, Julie Lux, Jeff McMenimen, David McNary, Rebecca Muchow, Amanda Nonnemacher, Christopher Palkowitsch, Denetrick Powers, Kerri Pearce Ruch, Max Salmen, Jackson Schwartz, Ben Shardlow, John Slack (Facilitator), Gordy Stofer, Aaron Tag, Wendy Underwood, Clayton Watercott, and Ellie Ziaie

Root District and Minneapolis 2040

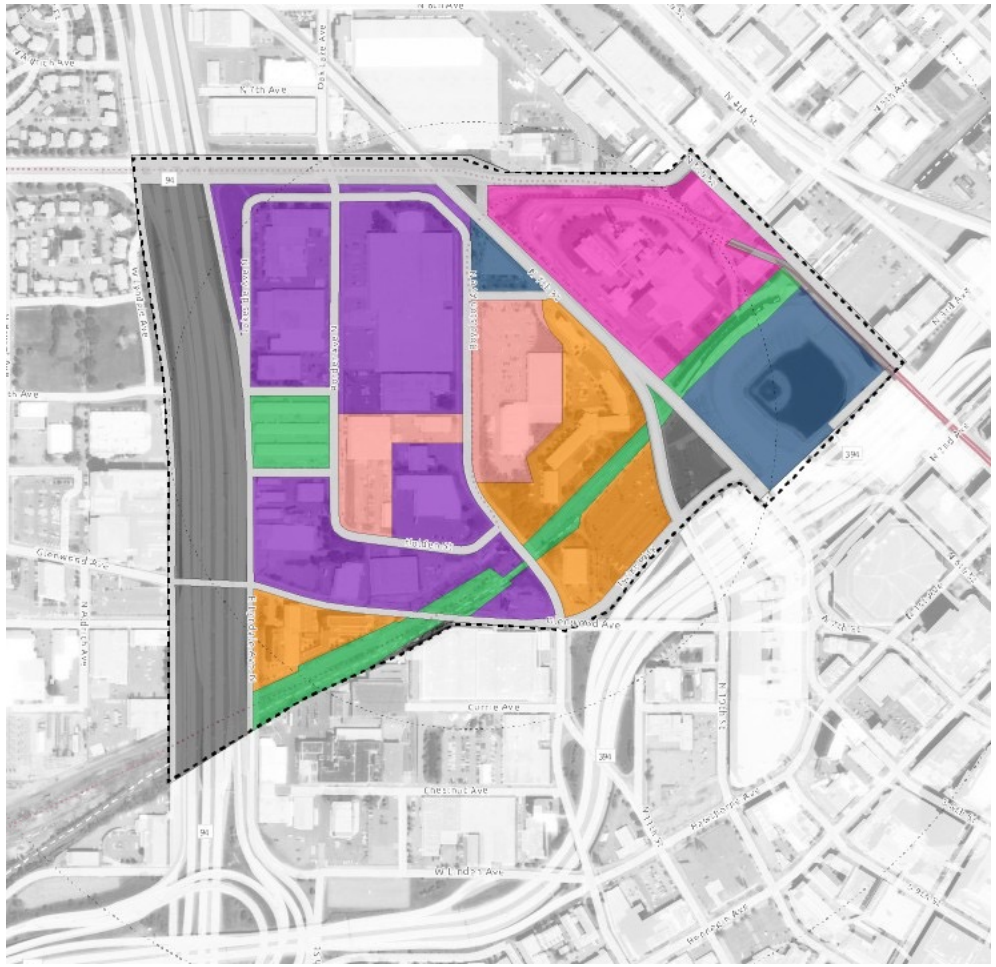
IGC

Supporting Materials

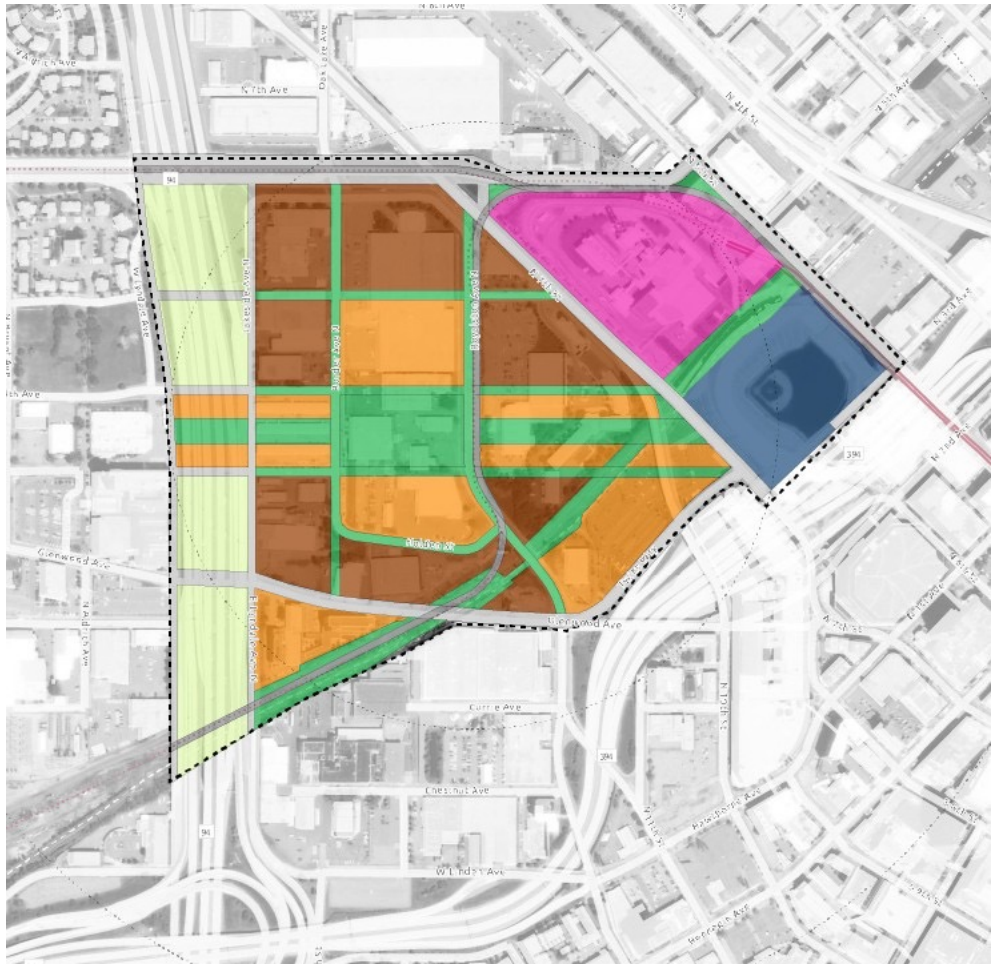
- Funding Sources
  Dayton Hudson Endowment, Bush Foundation, and Jack Dangermond Fund at the University of Minnesota
- Data Sources
  City of Minneapolis, Hennepin County, University of Minnesota, and Metropolitan Council
- Software Sources
  Visualization (Provided by MDC at the University of Minnesota)
    ArcGIS Pro, Adobe Creative Suite, Rhinoceros 3D, and Sketchup
  Collaboration and Workshop (Remote)
    Miro and Zoom

University of Minnesota - USA

Root District and Minneapolis 2040



Current 2021



Recommended Plan - Early Adopted 2050

The recommended plan envisions a ground plane devoted to providing low-cost, start-up economic opportunities for people who need access to equipment or facilities and who would be able to rent space for short periods of time. The plan also calls for a range sustainability and equity strategies to meet the city's comprehensive plan goals.

University of Minnesota - USA

Root District and Minneapolis 2040

IGC

Current 2021

MPL 2040	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	1	0	0	0	1	0	1	0	0	3
9	0	1	0	0	0	1	0	0	0	0	2
10	0	0	0	0	1	1	0	1	0	0	3
11	0	0	0	0	0	0	0	1	0	0	1
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
											0
											0
											0
											0
	0	2	0	0	1	3	0	3	0	0	9

Current 2021

Early Adopter 2035

MPL 2040	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	1	1	1	1	1	0	1	1	1	8
2	0	1	0	0	0	0	0	0	0	1	2
3	1	1	1	1	1	1	0	1	0	1	8
4	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0	1	1
6	1	1	1	1	1	1	1	1	0	1	9
7	1	1	1	1	1	0	1	1	0	1	8
8	0	3	3	1	3	1	1	0	1	1	14
9	1	3	3	1	3	1	1	1	0	1	15
10	1	3	3	1	3	1	1	1	1	1	16
11	1	1	1	1	1	1	1	1	1	1	10
12	0	1	1	1	0	1	0	1	0	1	6
13	1	3	3	1	0	1	1	1	0	1	12
14	0	0	0	0	0	0	0	0	0	0	0
											0
											0
											0
											0
	7	19	18	10	14	9	7	9	4	13	110

Early Adopter 2035

Early Adopter 2050

MPL 2040	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	3	3	1	3	1	0	1	1	3	16
2	0	3	0	0	0	0	0	0	0	1	4
3	1	3	3	1	1	1	0	1	0	3	14
4	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0	1	1
6	3	3	3	3	1	1	3	1	0	3	21
7	3	3	3	3	1	0	3	3	0	3	22
8	0	3	3	1	3	3	3	0	1	3	20
9	1	3	3	3	3	3	1	1	0	3	21
10	3	3	3	1	3	1	1	3	1	3	22
11	3	3	3	3	3	3	3	3	1	3	28
12	0	3	3	1	0	1	0	1	0	3	12
13	1	3	3	3	0	1	1	1	0	1	14
14	0	0	0	0	0	0	0	0	0	0	0
											0
											0
											0
											0
	15	33	30	20	18	15	15	15	4	31	196

Early Adopter 2050

Minneapolis 2040 Goals

1: Eliminate disparities
2: More residents and jobs
3: Affordable and accessible housing
4: Living-wage jobs
5: Healthy, safe and connected people
6: High-quality physical environment
7: History and culture
8: Creative cultural and natural amenities
9: Complete neighborhoods
10: Climate change resilence
11: Clean environment
12: Healthy, sustainable and diverse economy
13: Proactive, accessible and sustainable government
14: Equitable civic participation system

Most benefit	Benefit	Neutral	Detriment	Most detriment

Late Adopter 2035

MPL 2040	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	0	0	0	1	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	1	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	1	0	0	0	0	0	1
7	0	0	0	0	1	0	0	0	0	0	1
8	0	1	0	0	1	1	0	1	0	0	4
9	0	1	0	0	1	1	0	0	0	0	3
10	0	0	0	0	1	1	0	1	0	0	3
11	0	0	0	0	1	0	0	1	0	0	2
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
											0
											0
											0
	0	2	0	0	8	3	0	3	0	0	16

Late Adopter 2035

Late Adopter 2050

MPL 2040	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	3	3	1	3	1	0	1	1	1	14
2	0	1	0	0	0	0	0	0	0	1	2
3	1	3	1	1	1	1	0	1	0	1	10
4	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	0	1	1
6	1	1	1	1	1	0	1	1	0	1	8
7	1	1	1	1	1	0	1	1	0	1	8
8	0	3	1	3	1	1	1	0	1	3	14
9	1	1	1	1	1	1	0	1	0	3	10
10	1	3	3	3	3	1	1	1	1	3	20
11	1	3	3	3	3	1	1	1	1	3	20
12	0	1	1	1	0	0	0	1	0	1	5
13	1	1	1	1	0	0	0	0	0	1	5
14	0	0	0	0	0	0	0	0	0	0	0
											0
											0
											0
											0
	7	21	16	16	14	6	5	8	4	21	118

Late Adopter 2050

Non - Adopter

MPL 2040	WAT	AGR	GRN	ENE	TRAN	IND	INST	RES	HRES	TOUR	SUM
1	0	0	1	1	3	1	0	1	1	1	9
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	1	1	1	0	1	0	1	6
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	1	0	1	1	1	0	1	1	0	0	6
7	1	0	1	1	1	0	1	1	0	0	6
8	0	0	1	1	1	1	1	0	1	1	7
9	1	0	1	1	1	1	0	1	0	0	6
10	1	0	1	1	3	1	1	3	1	1	13
11	1	0	1	1	3	1	1	3	1	1	13
12	0	0	1	1	0	0	0	1	0	1	4
13	1	0	1	1	0	0	0	0	0	1	4
14	0	0	0	0	0	0	0	0	0	0	0
											0
											0
											0
	6	0	10	10	14	6	5	12	4	7	74

Non - Adopter 2050

Early Adopter MPL 2040

By 2035, the increased transit capacity and expansion of food-related incubator space increases economic opportunities and food access for underserved communities, while renewable energy systems address climate change. By 2050, those trends continue, as food-related businesses grow, carbon sequestration increases, and mixed-income housing becomes widespread. The district attracts tourists as a model of equitable, sustainable development.

Late Adopter MPL 2040

By 2035, the district advances few SDG goals beyond offering more affordable, accessible transportation infrastructure and some new housing and industrial jobs. By 2050, the increase in mixed-use and mixed-income development reduces inequality and expands sustainability efforts in urban agriculture, renewable energy, and electrified transportation. The district also becomes a popular tourism destination for people interested in locally grown food.

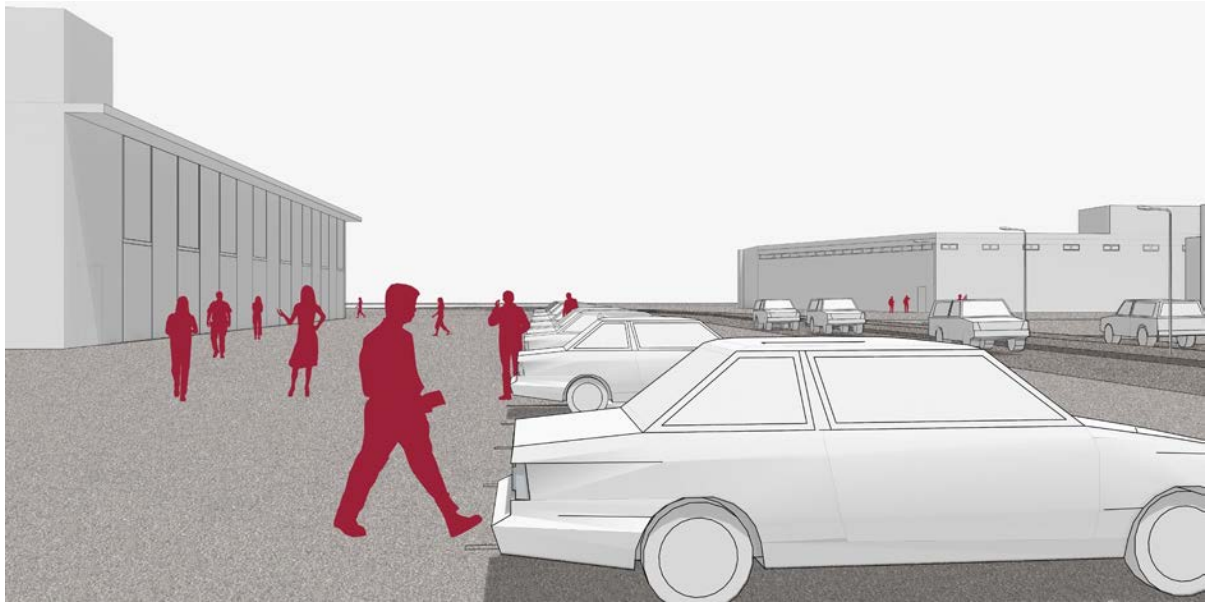
Non - Adopter MPL 2040

By 2050, with the current pattern of gentrification and high-end development filling the district, there are modest increases in the number of jobs, in more energy efficient buildings, in mixed-use land uses, and in food-related retail. The only area of significant improvement involves transportation, as the district becomes well served by public transit and as its high-rise buildings greatly increase the residential and commercial density of the area.

University of Minnesota - USA

Root District and Minneapolis 2040

IGC



Current 2021

Late Adopter 2050

Early Adopter 2050

Non - Adopter

Discussion

Discussion


1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
THE GLOBAL GOALS
For Sustainable Development
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE AND JUSTICE STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS