



ROADSHOW

Co-creational approach
promoting happier,
healthier and more
connected communities



This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No 608702

Roadshow Team: Prof.Dr. Craig L.Martin (TU Delft / UCLan) – Leader; Prof.Dr. Andy vd Dobbelsteen (TUD); Prof. Greg Keeffe (QUB); Dr. Riccardo Pulselli (UoS); Siebe Broersma (TUD); Prof.Dr. Han Vandevyvere (EnergyVille/NTNU); Dr. Andy Jenkins (QUB); Anneleen Vanderlinden (ThInk-e); Achille Hannoset (ThInk-e); Dylan Alling (Communication Advisor City-zen)

What is it? 12:55 – 13:15

- Live. Onsite. City-specific.
- Sustainable Neighbourhood / City Visions.
- Heart of Community.
- Team specialisms
 - Social impact. Lifestyles.
 - Urban design.
 - Architecture.
 - Carbon Accounting.
 - Building technology.
 - Mobility.
 - Energy Potentials.

Presented by Prof. Dr. Craig Lee Martin (TU Delft / UCLan)
City-zen Roadshow Leader email: C.L.Martin@tudelft.nl



What is it? 12:55 – 13:15

- Expert Stakeholders.
- Bridge. Specialist knowledge - stakeholder experiences, understanding commitment & enthusiasm.
- Highly visual, replicable, vital, fun.
- Story telling.





MENORCA 'SWAT' STUDIO (FEB 2017)

- City Data
- Pro-forma
- Maps
- Energy Data

SWAT Studio –
2-Week Intensive
'Onsite' Workshop in
Roadshow City



3 MONTHS





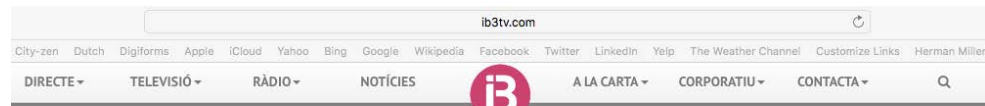
MENORCA 'SWAT' STUDIO (FEB 2017)

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Pertanyen a la Universitat Tecnològica de Delft

Alumnes d'una universitat holandesa dissenyen propostes a l'entorn urbà de Maó per reduir la petjada de CO2 a l'atmosfera

28/02/2017 15:35h comparteix  

Reduir les emissions de CO2, objectiu del programa City-Zen Roadshow de la UE



MORE VIDEOS ^

1:33 / 1:52 

Reduir les emissions de CO2 a l'atmosfera i millorar el benestar dels ciutadans és l'objectiu del programa **City-Zen Roadshow** de la Unió Europea, que enguany ha triat Menorca com a zona d'estudi. 12 alumnes del màster de la **Universitat Tecnològica de Delft** d'Holanda preparen la visita dels tècnics de la Unió el pròxim mes d'abril.



MENORCA 'SWAT' STUDIO (FEB 2017)

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3 MONTHS

ENERGY

roof potentials



communal green-blue roof investments



facade upgrades



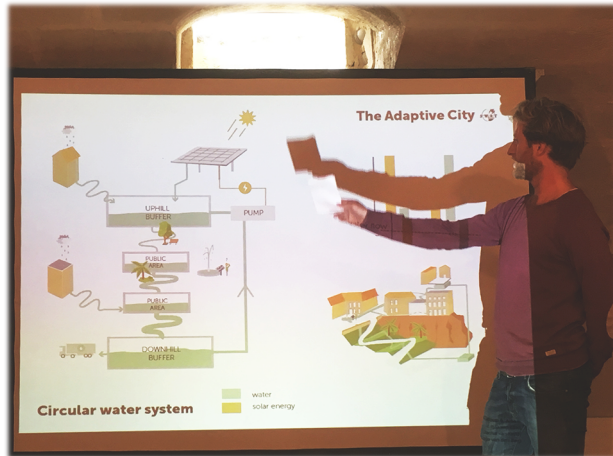
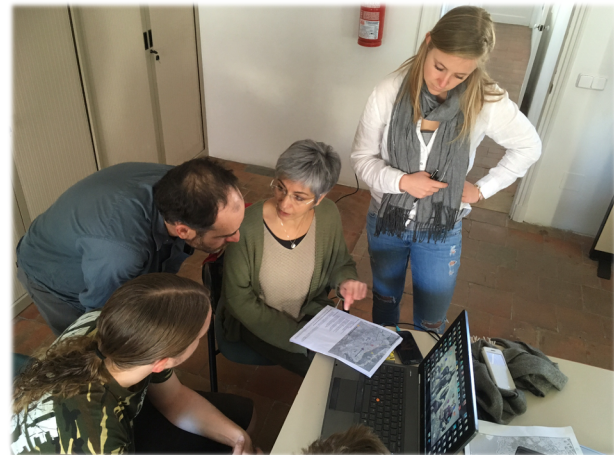
green the closed facades
renew the open facades



urban landmark roofs

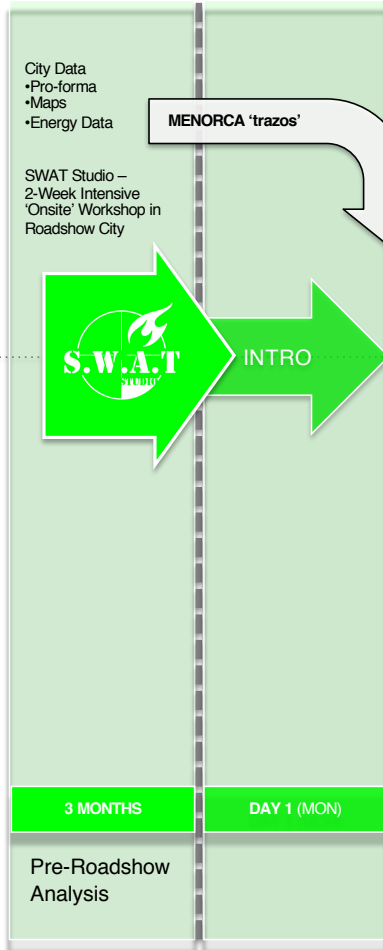


urban roofs as shade
providing landmarks





DÍA 1: MENORCA 'TRAZOS'



Belfast (UK), The Colin Community Hub.



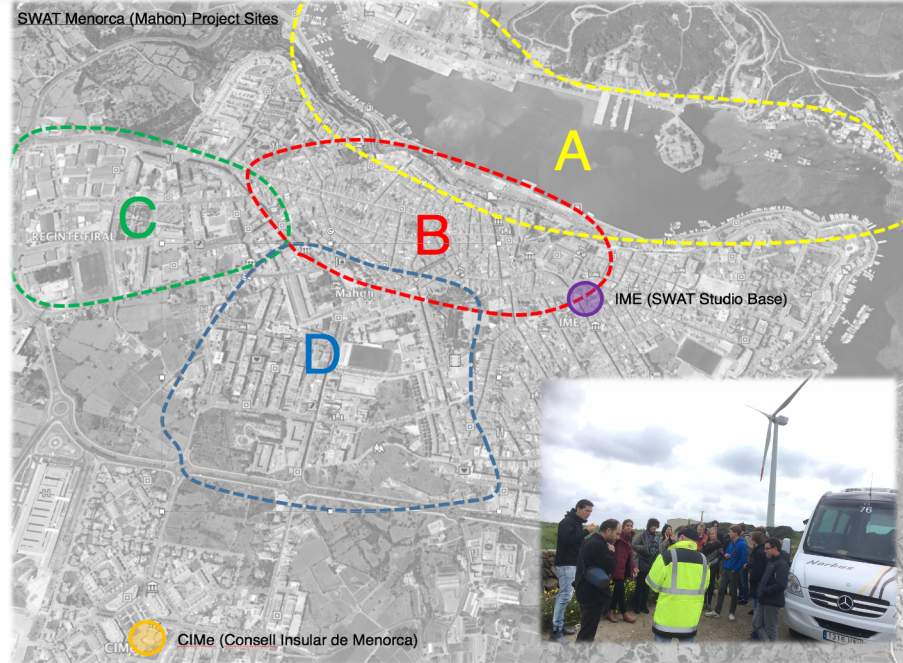
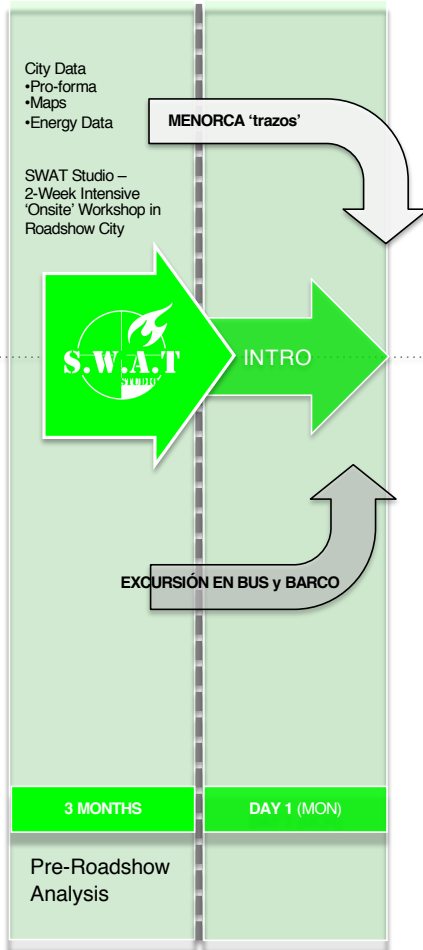
Izmir (Turkey), Yasar Universitesi.



Gruz, Dubrovnik (Croatia).

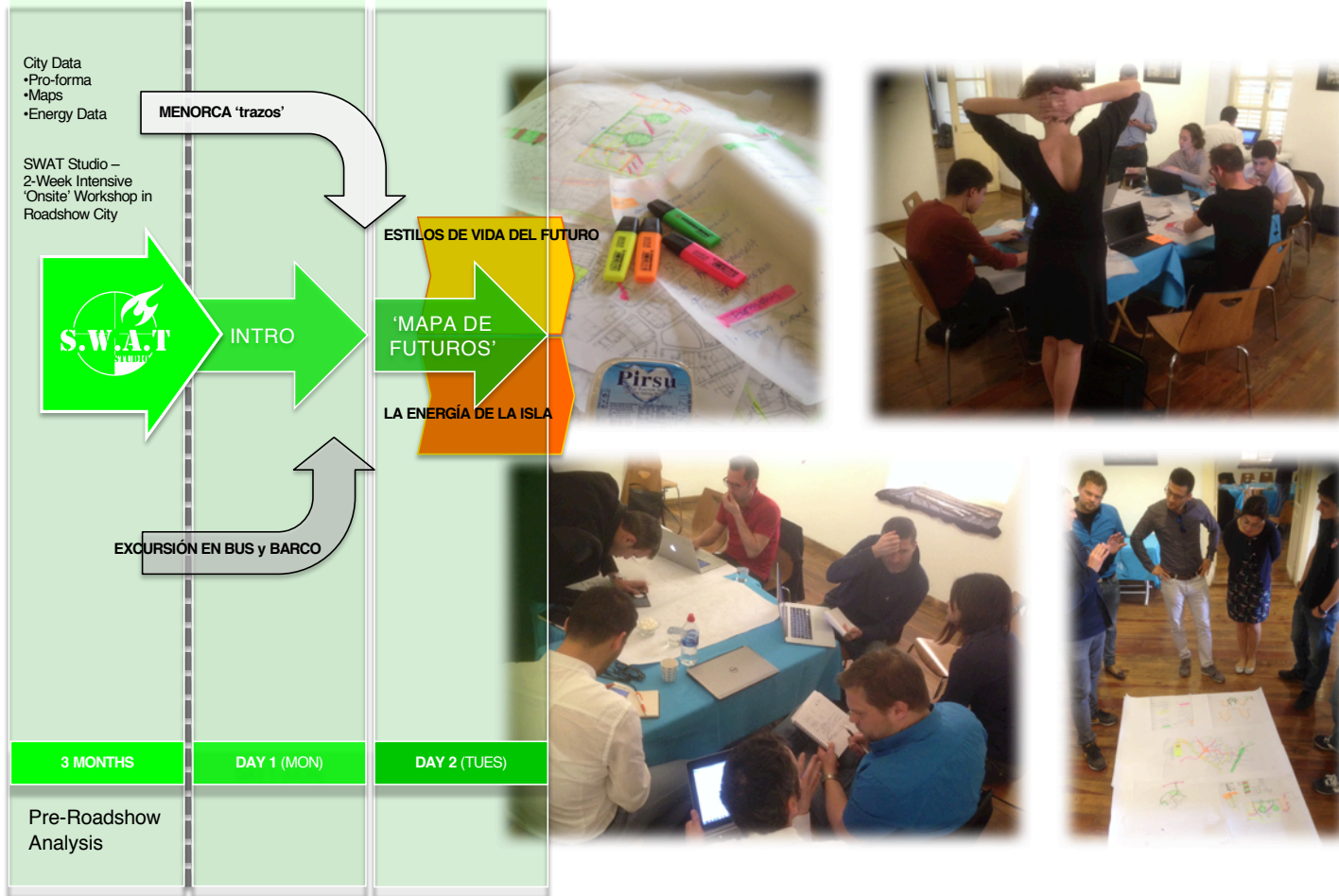


DÍA 1: EXCURSIÓN EN BUS Y BARCO



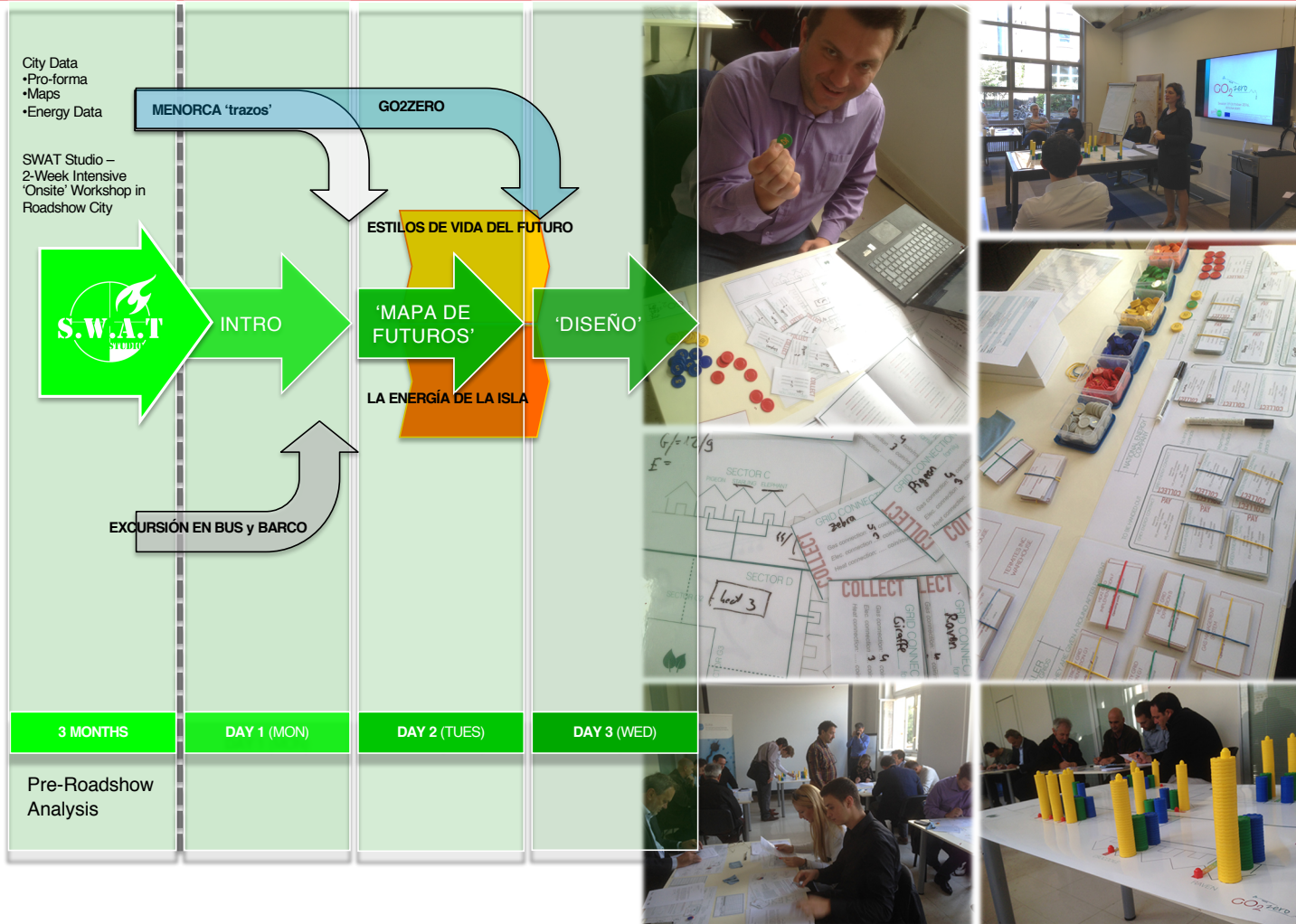


DÍA 2: 'MAPA DE FUTUROS' TALLERES PARALELOS COMENZAN



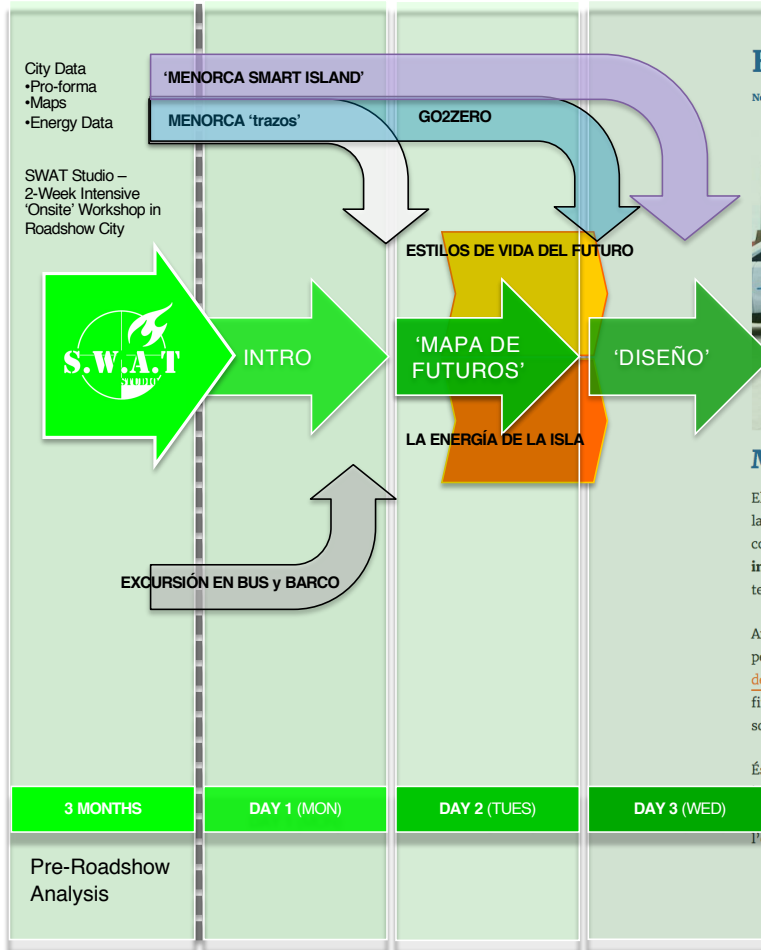


DÍA 3: 'DISEÑO' – SERIOUS GAME 'GO2ZERO'





DÍA 3: 'DISEÑO' – MENORCA SMART ISLAND GROUP



El Consell impulsa l'ús del vehicle elèctric

Noticia publicado en: Actualidad - Fecha: 16 Septiembre, 2016 - Hora: 17:26



Menorca Smart Island

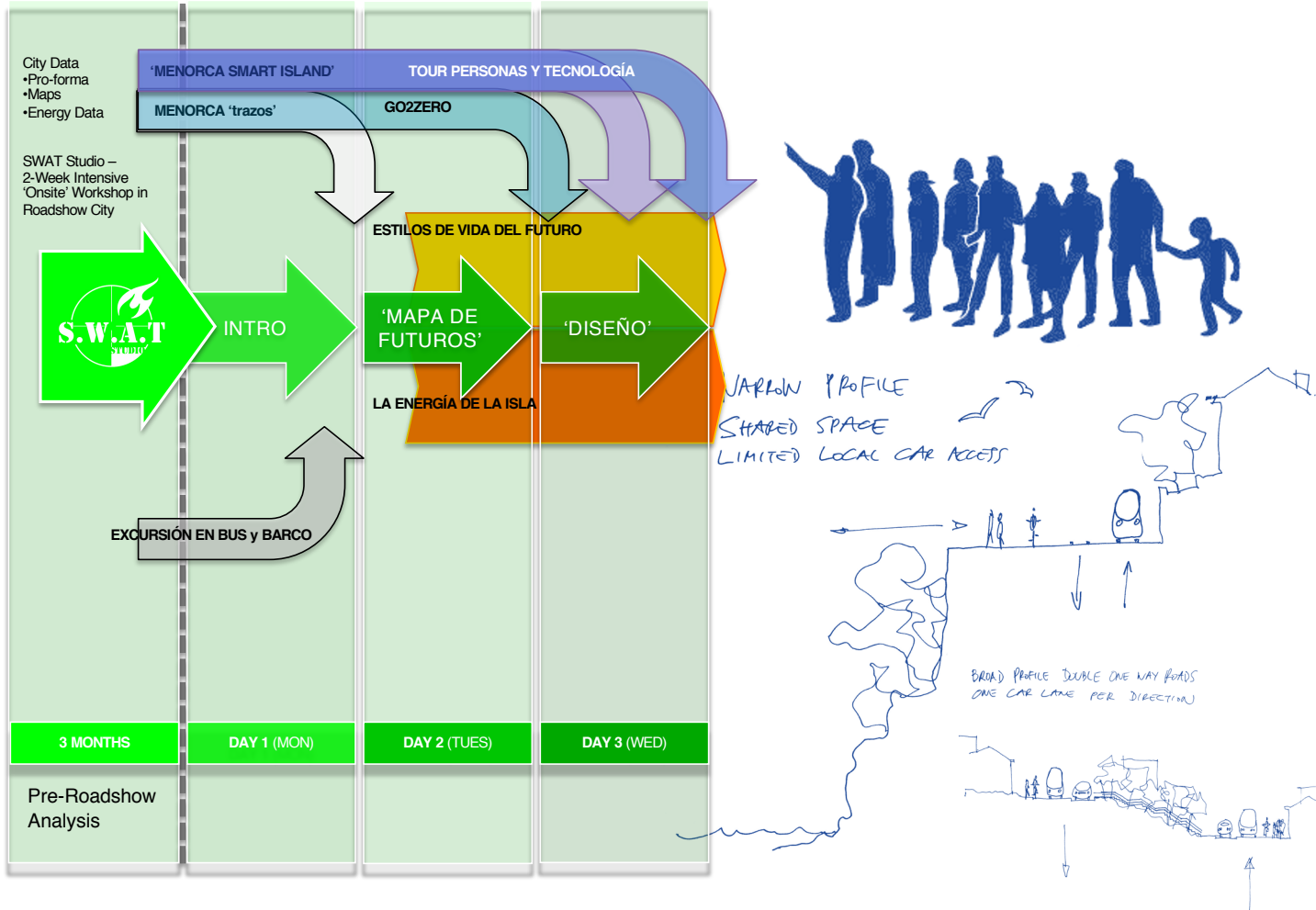
El fet diferencial de [Menorca](#) com a **espai natural únic i fràgil a l'impacte de la petjada humana**, la pressió que rep el territori a causa d'una important afluència turística i la seva categorització com a [Reserva de Biosfera](#) des de l'any 1993, fa que es plantegi la necessitat de fer una **gestió intel·ligent i innovadora dels recursos limitats disponibles**. Al mateix temps, es busca que la tecnologia formi part del cicle d'accions i esforços constants de manteniment d'aquest entorn.

Amb la voluntat de seguir evolucionant i continuar la política d'utilització estratègica de les TIC per a la millora d'aspectes claus per a l'illa, des del departament d'Innovació [del Consell Insular de Menorca](#) es treballa en l'estratègia "*Menorca Smart Island, Menorca Territori VIU*" amb la finalitat d'ajudar a millorar els serveis públics, la sostenibilitat mediambiental, la realitat socioeconòmica de Menorca i la qualitat de vida dels ciutadans de l'illa i dels seus visitants.

És en el marc d'aquesta estratègia, i en concret de la línia "Mobilitat i Energia", que les [Reserves d'Innovació i Reserva de Biosfera](#) treballen conjuntament per tal de dissenyar projectes i situacions conjunts envers l'impacte ambiental, la pressió humana, la mobilitat i accessibilitat i l'eficiència energètica com a principals aspectes transversals d'interès.

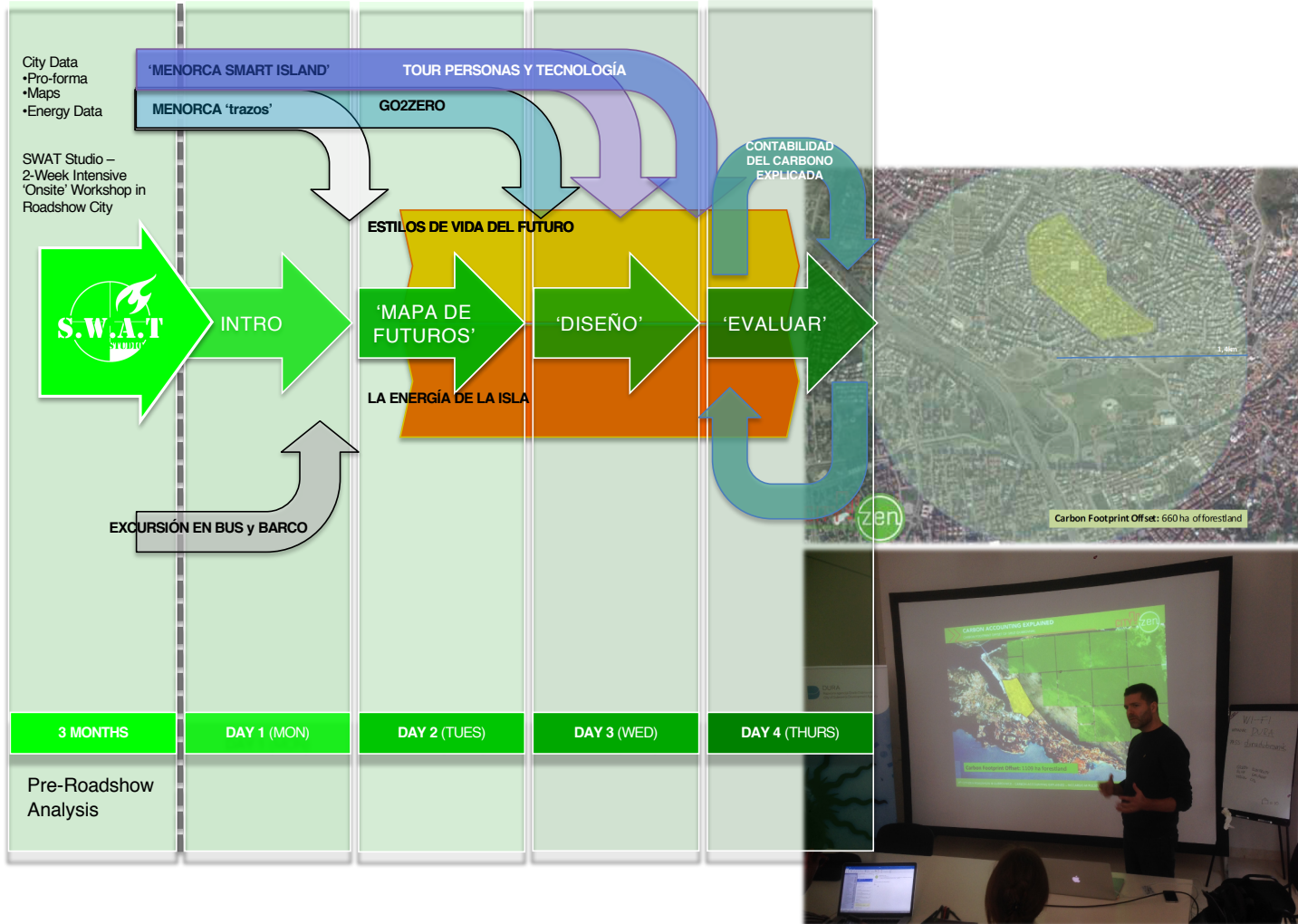


DÍA 3: 'DISEÑO' – TOUR PERSONAS Y TECNOLOGÍA



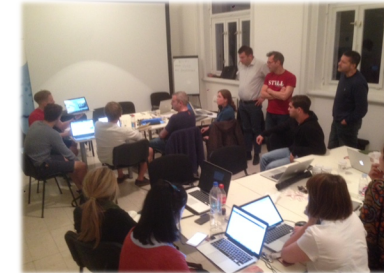
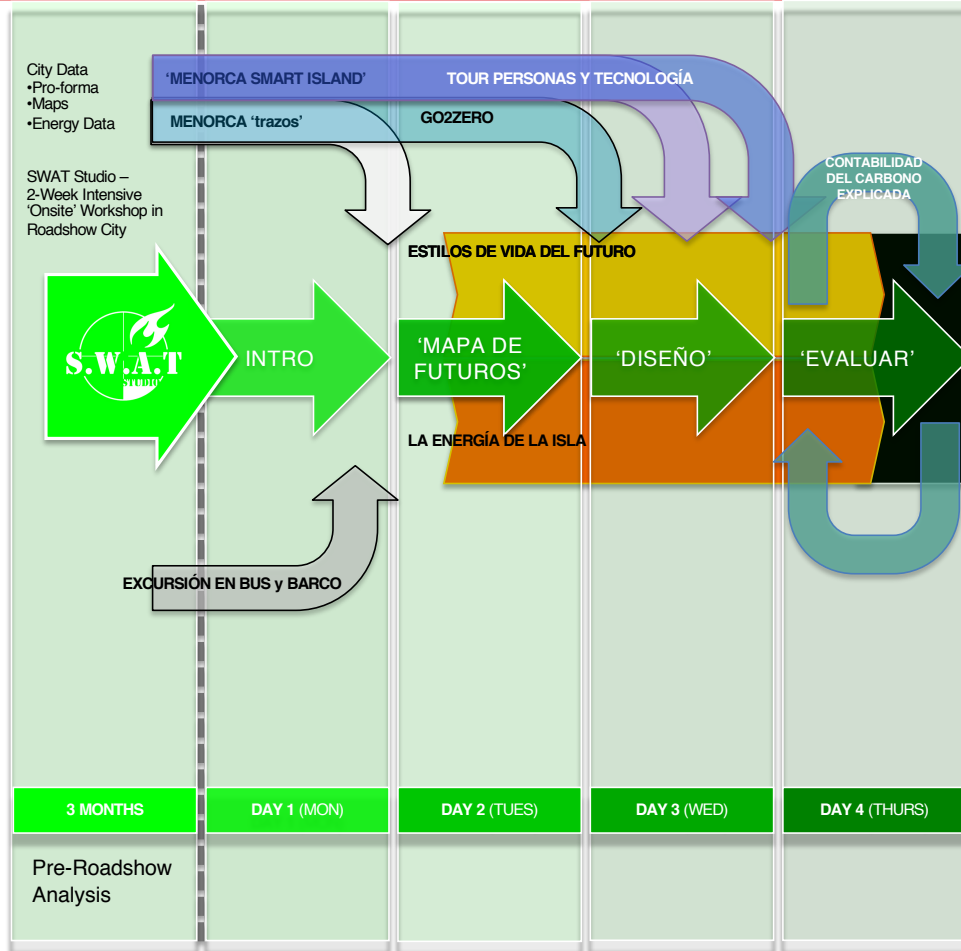


DÍA 4: 'EVALUAR' - CONTABILIDAD DEL CARBONO EXPLICADA



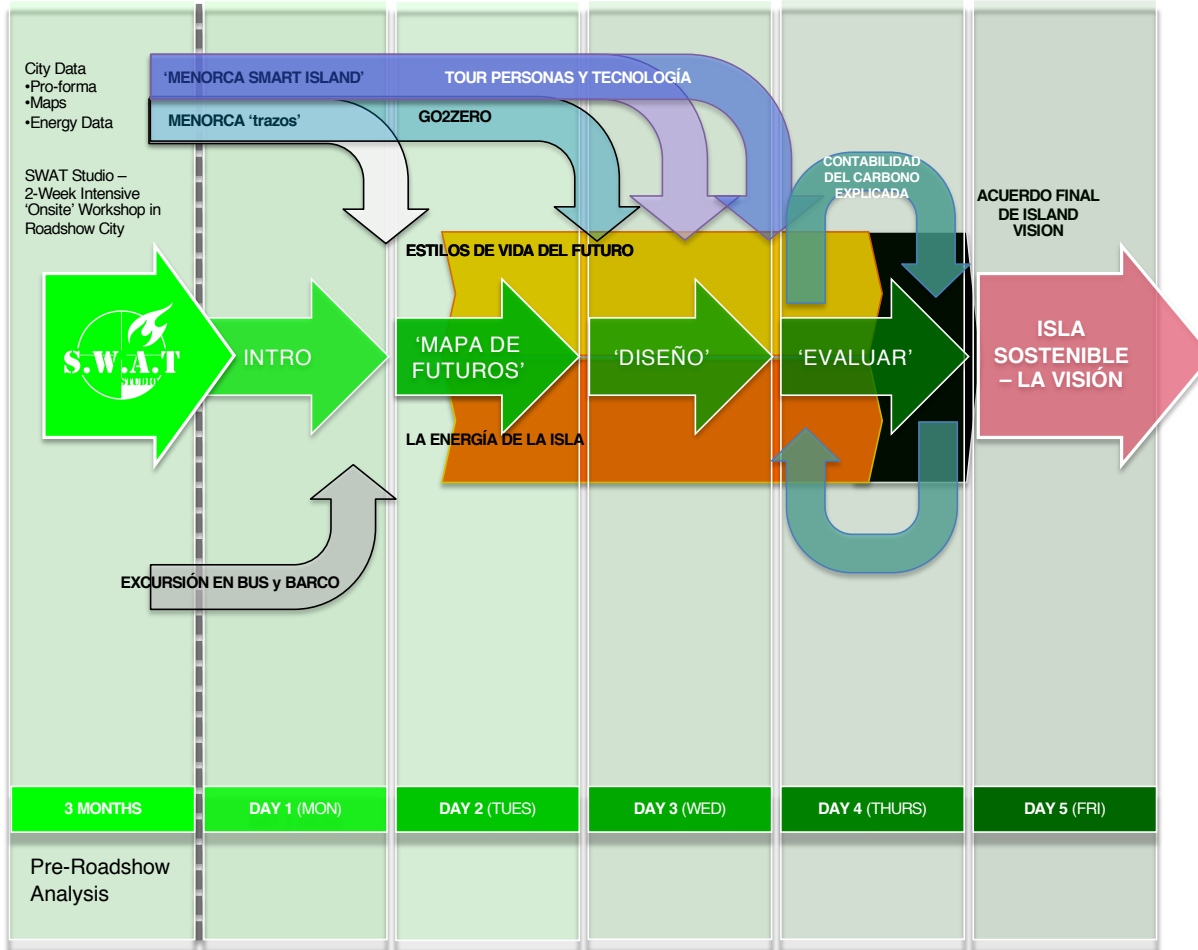


DÍA 4: 'EVALUAR' - ACUERDO FINAL DE ISLAND VISION





DÍA 5: 'VIE' - ISLA SOSTENIBLE – LA VISIÓN



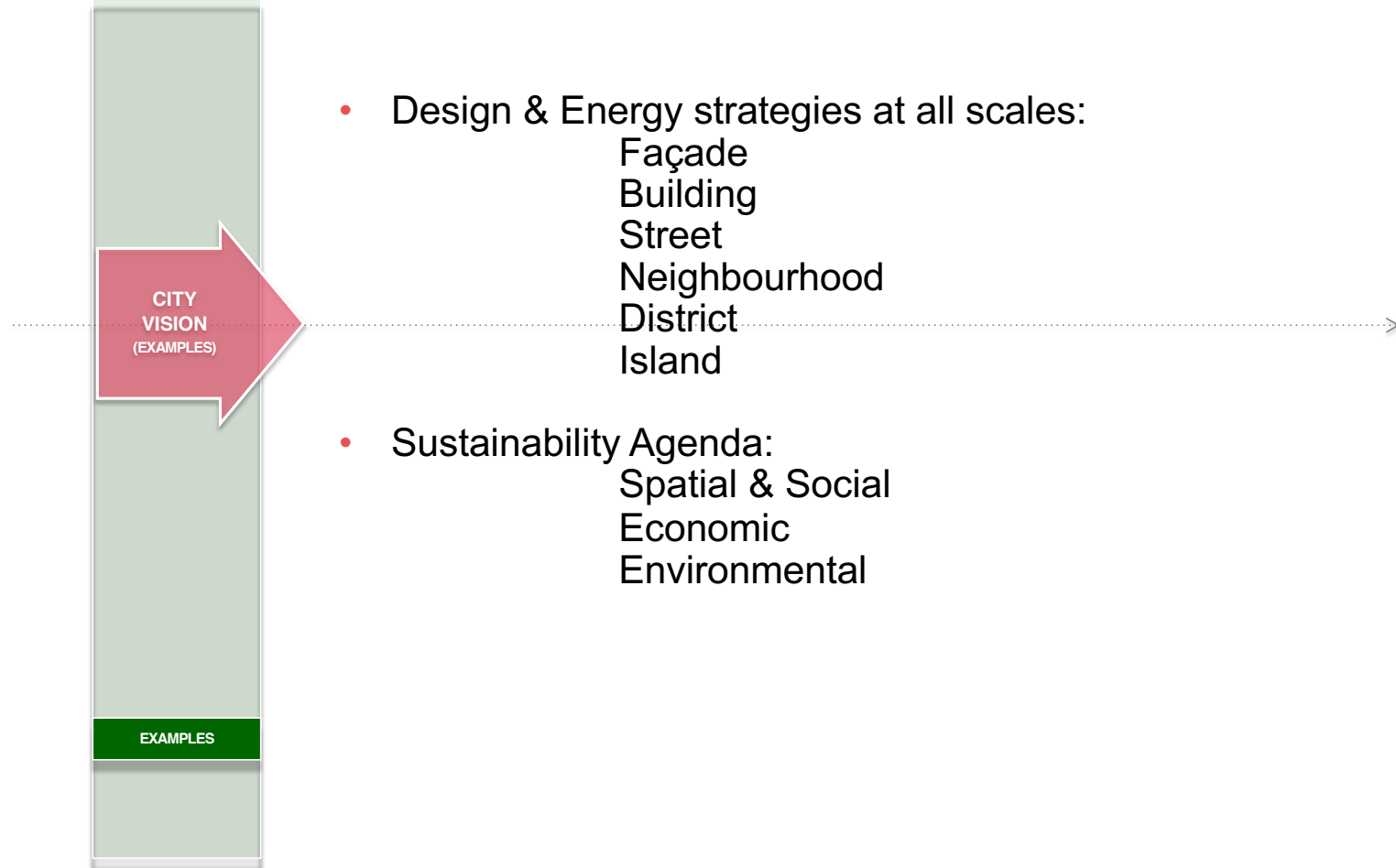


DÍA 5: 'VIE' - ISLA SOSTENIBLE – LA VISIÓN





'SUSTAINABLE ISLAND VISION' – WHAT TO EXPECT?





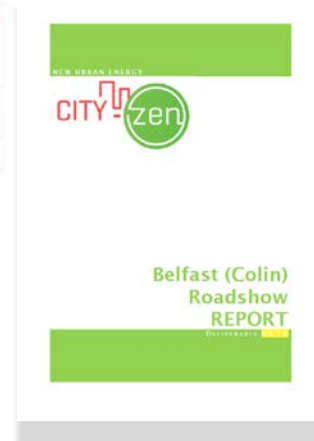
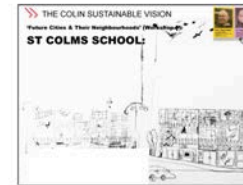
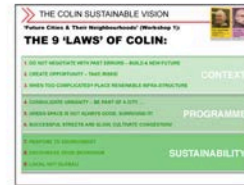
'CITY VISION' - EXAMPLES

3/21,

3/21/16

CITY VISION (EXAMPLES)

EXAMPLES





'CITY VISION' - EXAMPLES

CITY VISION (EXAMPLES)

PREVIOUS ROADSHOW EXAMPLES (BELFAST)

ENERGY MASTER PLAN FRAMEWORK

CARBON FOOTPRINT PER HOUSEHOLD - 1.81 tCO₂e/yr

SUITABLE ENERGY SYSTEMS

Calculations scheme 1.

ECOLOGICAL FOOTPRINT PER HOUSEHOLD - 1.31 gha

TOTAL ECOLOGICAL FOOTPRINT per HOUSEHOLD - 13.7 gha

SUITABLE ENERGY SYSTEMS

Calculations scheme 2.

COLIN DISTRICT ECOLOGICAL FOOTPRINT HEADHOUSE RATE = 13.961 gha

MEASURES

CITYzen

Belfast (Colin) Roadshow REPORT

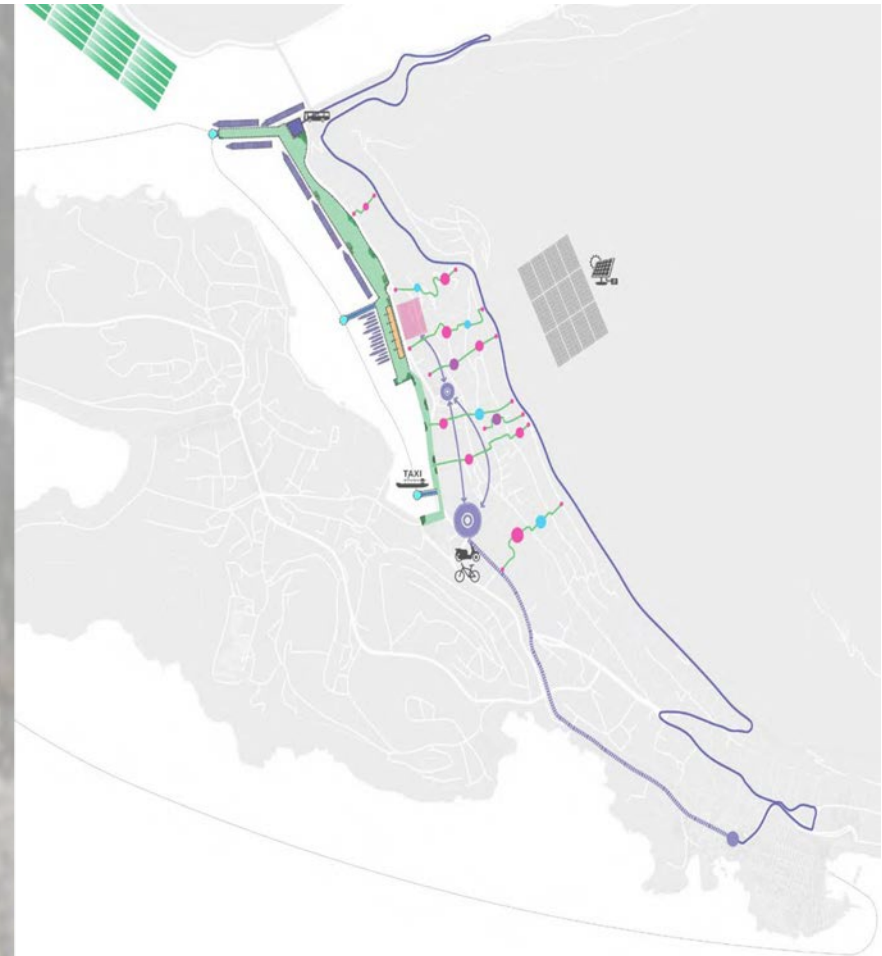


POST-ROADSHOW OUTCOMES

- Impactful Academic, Technical & Societal Outcomes.
- Renewed collaborations & working processes.
- A 'Sustainable Island Vision' owned by your Island and you!
- A potential springboard for European funding in **Horizon2020 e.g. SC3 Decarbonising energy systems of geographical Islands.**

Challenges? 13:15 – 13:30

- **Social challenge. Personality.**
- **Trust, commitment. Short time frame.**
- **Communication. Specialist to non-specialist & vice versa...**
- **Flexibility. Diverse non-institutional groups, ages, volunteers, interests & availabilities.**



Challenges? 13:15 – 13:30

El Maó més autosuficient

• Too radical!? Fantasy? *Presentant propostes per fer que la ciutat sigui més sostenible*

• Reaching the majority. Not preaching to the converted minority.

• Stakeholders are volunteers. Students open the door.

DE LA FOTOGRAFIA

Quan venen els vents, els mariners, a les unes cases d'edificis en el port de Maó, a canvi de tenir una ciutat sostenible i sostenible, i pensada per al qual dels seus habitants i usuaris per al port. Aquesta ciutat de les grans necessitats

El port de Maó és un dels ports més importants de les Illes Balears i té una gran importància social. El port de Maó és un dels ports més importants de les Illes Balears i té una gran importància social. El port de Maó és un dels ports més importants de les Illes Balears i té una gran importància social.

Plaza Conquesta. Aquest punt quasi en total de les Illes Balears, es podria convertir en una espècie de mercat agrari, totalment desmuntable, reconfigurable i ple de vegetació, que es destinaria també a food, amb espais per a la lectura. Comptaria amb panells solars per fer-ho totalment autosuficient.

Dues setmanes de treball a l'illa per presentar els seus projectes

Els estudiants han estat a Menorca durant dues setmanes, temps durant el qual han estat analitzant les característiques de la ciutat i les seves necessitats.

adjudicat, per tal d'aplicar-hi les millors mesures en matèria d'eficiència energètica i autosuficiència, així com també d'atorgar



Port. Els alumnes hi proposen un canvi d'aspecte radical, per tal de seguir molt més diafan i pensat per al present i el futur. El projecte consisteix a transformar el port de Maó en un espai més obert i més integrat amb la ciutat. El projecte consisteix a transformar el port de Maó en un espai més obert i més integrat amb la ciutat.



tindrien plaques solars. Els edificis tindrien plaques solars. Els edificis tindrien plaques solars. Els edificis tindrien plaques solars.

Mira Menorca Otro estilo de vida para cero emisiones

Tras Amsterdam, Belfast, Esmirna y Dubrovnik, el seminario de la UE City-Zen debatirá durante esta semana en la isla para reducir el consumo energético

GABRIEL MORENO

La isla debe cambiar su estilo de vida y hábitos de consumo energéticos. Así lo explicó ayer Craig Keffee, profesor de Arquitectura Sostenible y Director de Investigación de la Universidad de Queens en Belfast, en la primera jornada del programa City-Zen, que se está llevando a cabo en la isla hasta este viernes 28 de abril con el objetivo de promover entre la ciudadanía el concepto de ciudades y regiones con energía cero.



Los ponentes aprovecharon la primera jornada para conocer Favàritx. © FOTO CITY-ZEN

«Necesitamos adoptar cambios radicales en nuestro comportamiento en relación al uso de las energías», afirmó el académico y urbanista con 25 años de experiencia en la sostenibilidad, el uso de la energía y su impacto en el diseño de la forma construida y el espacio urbano, en el taller que lleva por título «Estilos de vida del futuro».

CONTRADICCIÓN De hecho, en su opinión, es una contradicción que una isla que es Reserva de Biosfera, como es Menorca, tenga tan solo un 32% de energías renovables. Es más, el actual nivel de producción de energía verde ha caído en la isla al nivel más bajo de los últimos siete años.

Otro de los ponentes de la primera jornada, Craig L. Martin, doctor en Arquitectura en la Universidad Técnica de Delft, en los Países Bajos, es el encargado de dirigir y comunicar el trabajo y resultados de esta iniciativa académica. «Si lo que comunicamos en esta



El puerto de Maó fue otra de las visitas de campo. © FOTO CITY-ZEN

sala se queda aquí, no hacemos bien nuestro trabajo», explicó el también arquitecto. «De hecho, buscamos animar a la ciudadanía a que participe con sus aportaciones en este proyecto», añadió.

Desde su punto de vista, Menorca tiene potencial. «Tenéis sol, viento, no hay rascacielos que tapen la luz solar y existe calidad de vida». Pero la isla también tiene como punto en contra su dependencia de los combustibles fósiles, «que son perdedores». Para el profesor

Martin existe un nexo claro entre la producción de energía renovable, la economía y el estilo de vida.

Después de pasar en 2016 por Amsterdam, Belfast, Esmirna y Dubrovnik, Menorca es el quinta parada de este seminario itinerante financiado por la Unión Europea y coordinado en la isla por el Institut Menorquí d'Estudis (IME), en colaboración con el Ayuntamiento de Maó y Colegio Oficial de Arquitectos de las Illes Balears.

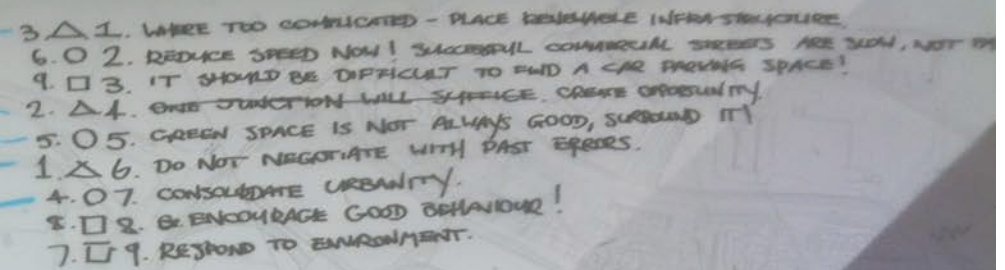


Eficiencia ESCASA. Según el profesor Keffee, el rendimiento de la central eléctrica de Maó es de apenas un 20%, «lo cual demuestra la urgencia del cambio de modelo energético».

Presented by Prof. Dr. Craig Lee Martin (TU Delft)
City-zen Roadshow Leader email: C.L.Martin@tudelft.nl

Successes? 13:15 – 13:30

- Demonstrating Social benefit and what matters to people.
- Changing mind-sets (Visualising the challenge).
- Belfast. Deprived area. Roadshow in School.
- Dubrovnik. Contribution award.
- Menorca. Foundation for Menorca 2030 Strategy.
- Roeselare. 300 citizens reached in 5 days. Revisit next week.
- Amersfoort. Invited by apartment owners not municipality.
- Research impact. Co-creative methods / energy strategies.
- Educational impact. All levels.
- Nicosia. Bicommunal. Peace.

- 
3. 1. WHERE TOO COMPLICATED - PLACE RENEWABLE INFRASTRUCTURE.
 6. 2. REDUCE SPEED NOW! SUCCESSFUL COMMERCIAL STREETS ARE SLOW, NOT FAST.
 9. 3. IT SHOULD BE DIFFICULT TO FIND A CAR PARKING SPACE!
 2. 4. ONE JUNCTION WILL SUFFICE. CREATE OPPORTUNITY.
 5. 5. GREEN SPACE IS NOT ALWAYS GOOD, SURROUND IT!
 1. 6. DO NOT NEGOTIATE WITH PAST ERRORS.
 4. 7. CONSOLIDATE URBANITY.
 8. 8. ENCOURAGE GOOD BEHAVIOUR!
 7. 9. RESPOND TO ENVIRONMENT.

- △ CONTEXT
○ PROGRAMME
□ SUSTAINABILITY.

BEL - PAST.

Successes? Case Study Nicosia 13:15 – 13:30

CyprusMail Online

The Global Choice for our Island's News, Views and Information

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Educating Nicosia residents on creating a green city

MAY 21ST, 2019

ANNETTE CHRYSOSTOMOUI

EDUCATION

0 COMMENTS



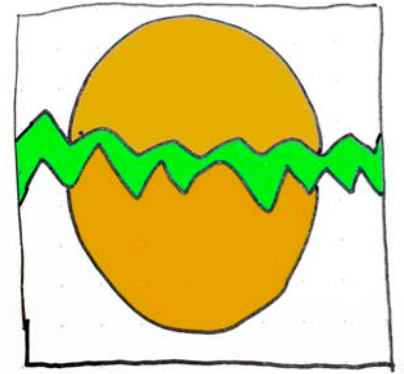
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Urban Design



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Problems

Division

Not the biggest.....

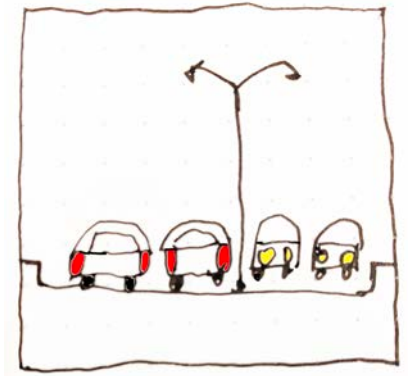


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Problems

Car usage

Bigger...

Heat island

Climate change
Sustainability

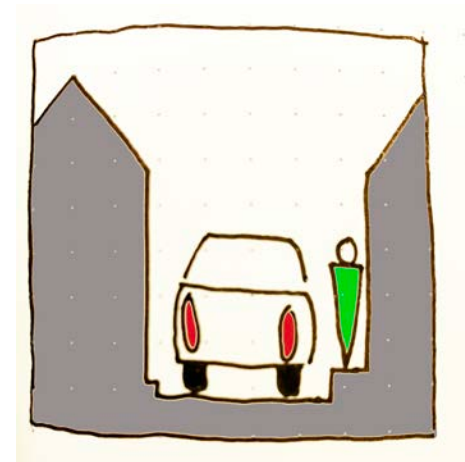


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Problems

People unfriendly
space

Car dominated...

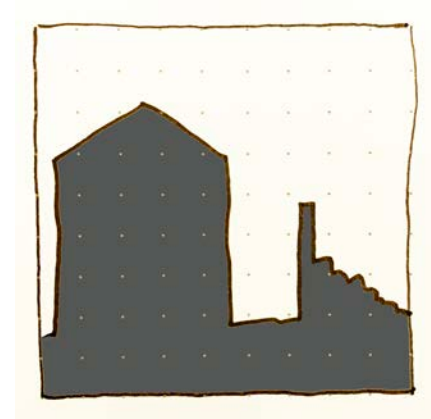


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Problems

Heritage at risk

The possibilities
are endless.....

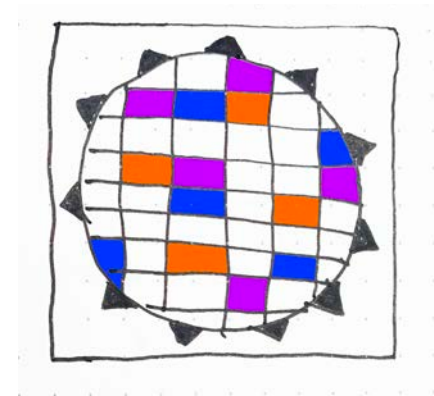


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Problems

No obvious centre
public space in the
city



Nicosia, Cyprus. May 2019

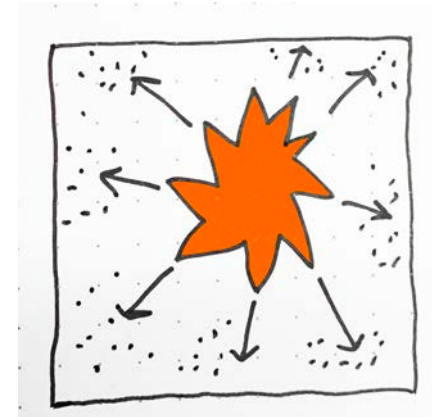
Urban Design

Problems compounded by

Suburban growth



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Problems

Suburban growth

No transport
infrastructure

Car-based transit



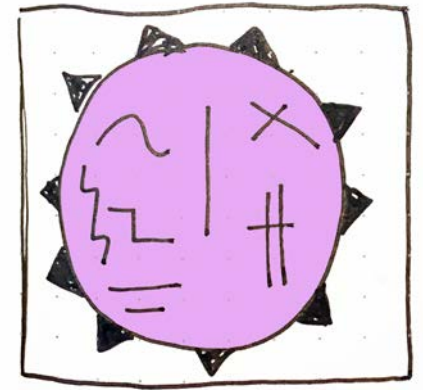
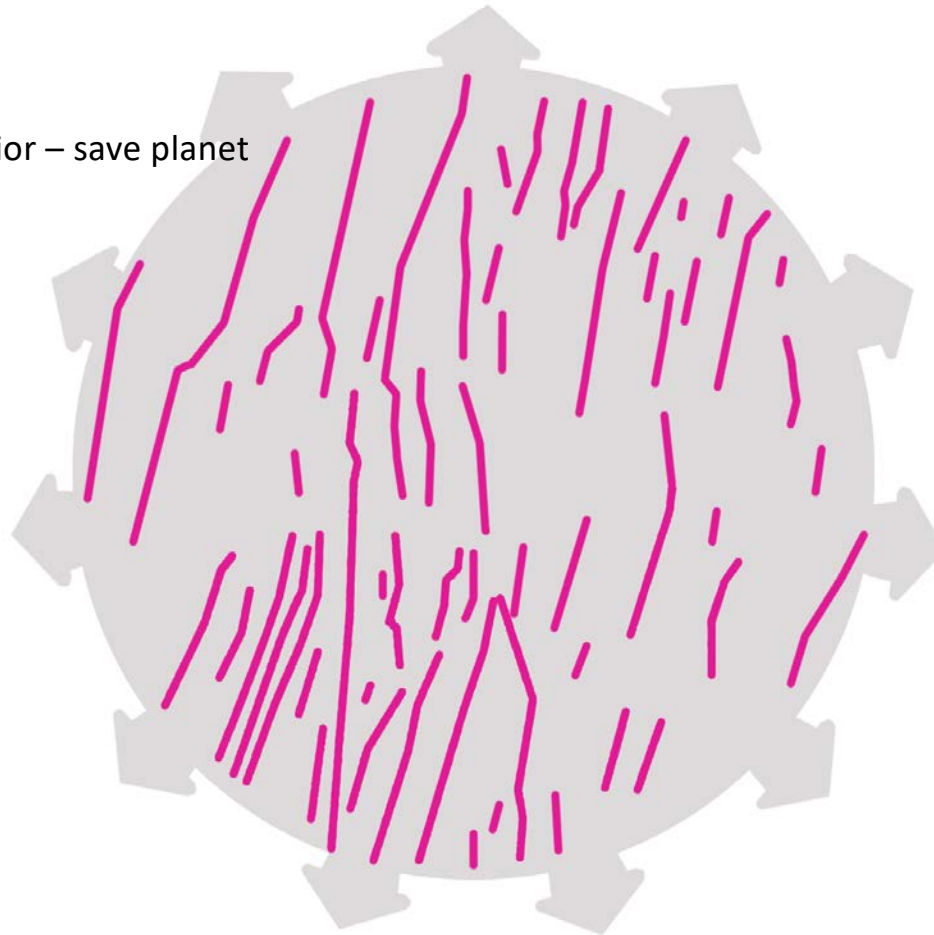
Nicosia, Cyprus. May 2019

Urban Design

Key Premise

Change space – change behavior – save planet

Network issues
N-S



Network issues

Change space

Change behaviour

Save lives

Save planet

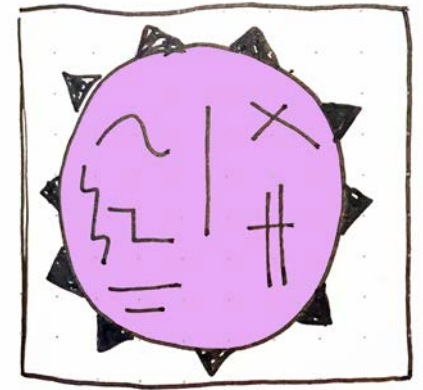
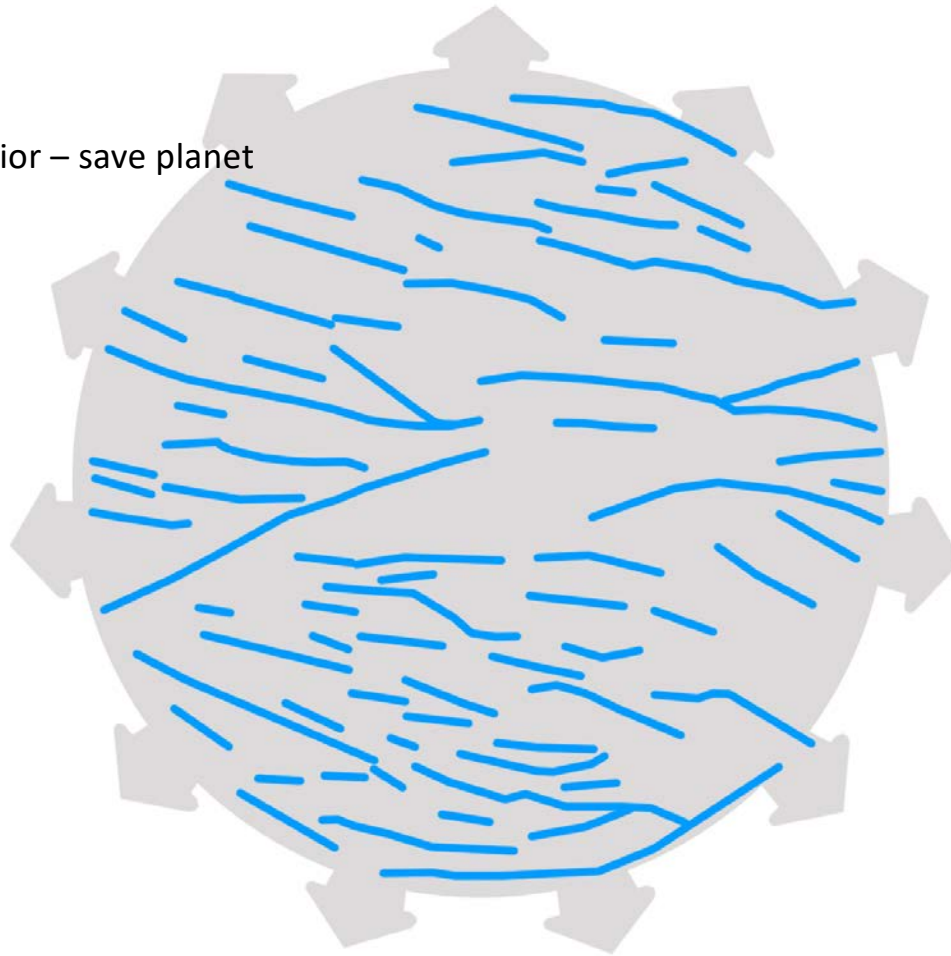


Urban Design

Key Premise

Change space – change behavior – save planet

Network issues
E-W



Network issues

Change space

Change behaviour

Save lives

Save planet



Urban Design

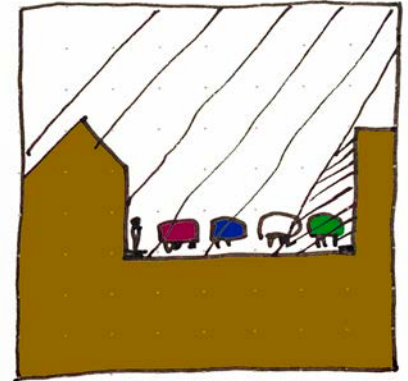
Key issues

Change space – change behavior – save planet

Get people out of the car.... 2000 deaths a year from circulatory problems....



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Get people out of the car

Change space

Change behaviour

Save lives

Save planet



Nicosia, Cyprus. May 2019

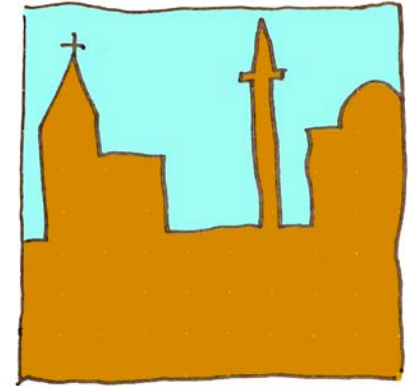
Urban Design

History to heritage

How do we unlock resilience and keep all histories.....



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



History to heritage

History

History

History

People

Local global



Nicosia, Cyprus. May 2019

Urban Design

The Challenge

Invent something that you will actually do !

Affordable

Time-bound

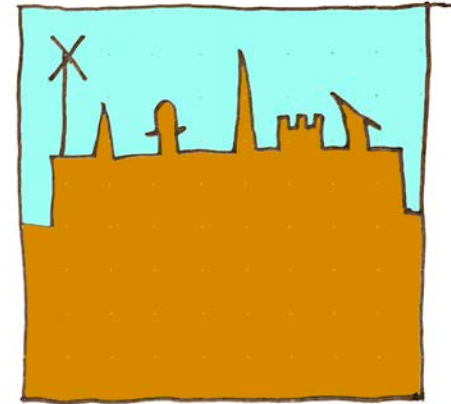
Methodological and Emergent

Politically acceptable

Understandable by all

Yet.....

Radical – because it's an emergency!!



The Challenge

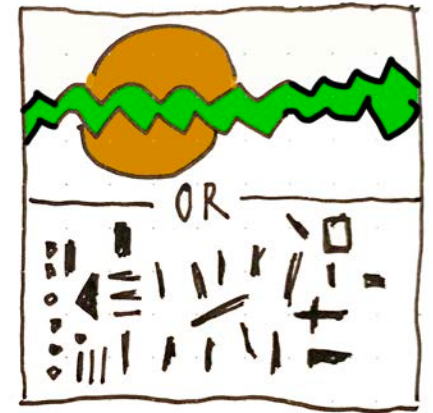
Community buy-in

But radical change



Urban Design

Greenzone



Green zone analysis

Green zone

Geographically immense

Spatially invisible

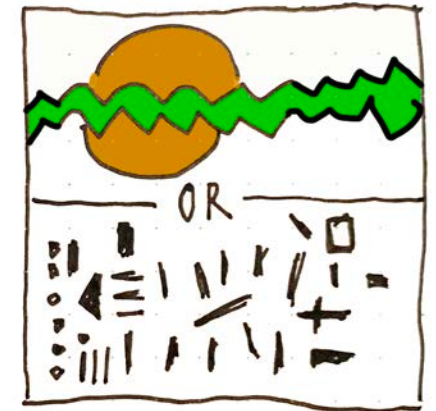


Urban Design

Greenzone



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Green zone analysis

Green zone

Geographically
immense

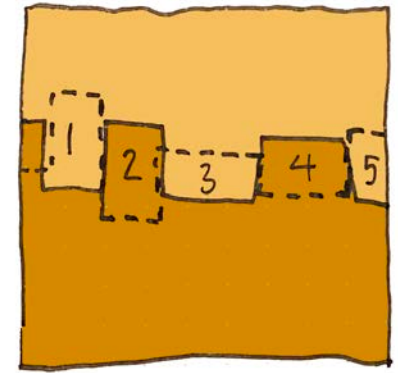
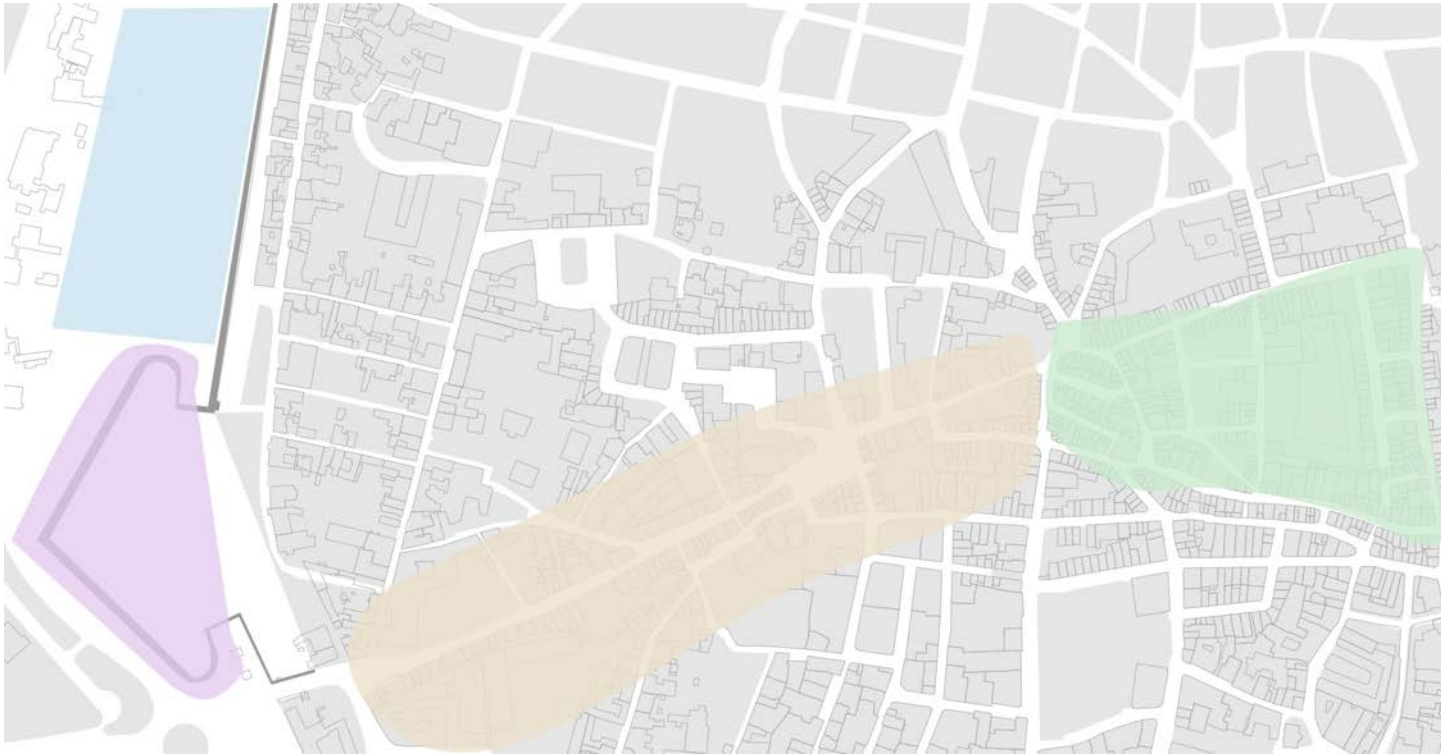
Spatially invisible



Nicosia, Cyprus. May 2019

Urban Design

Zoning the Greenzone



Peacemeal Green-zone

Green zone

Too complex to
remove wholly

So do in bits.....

Benefit each side

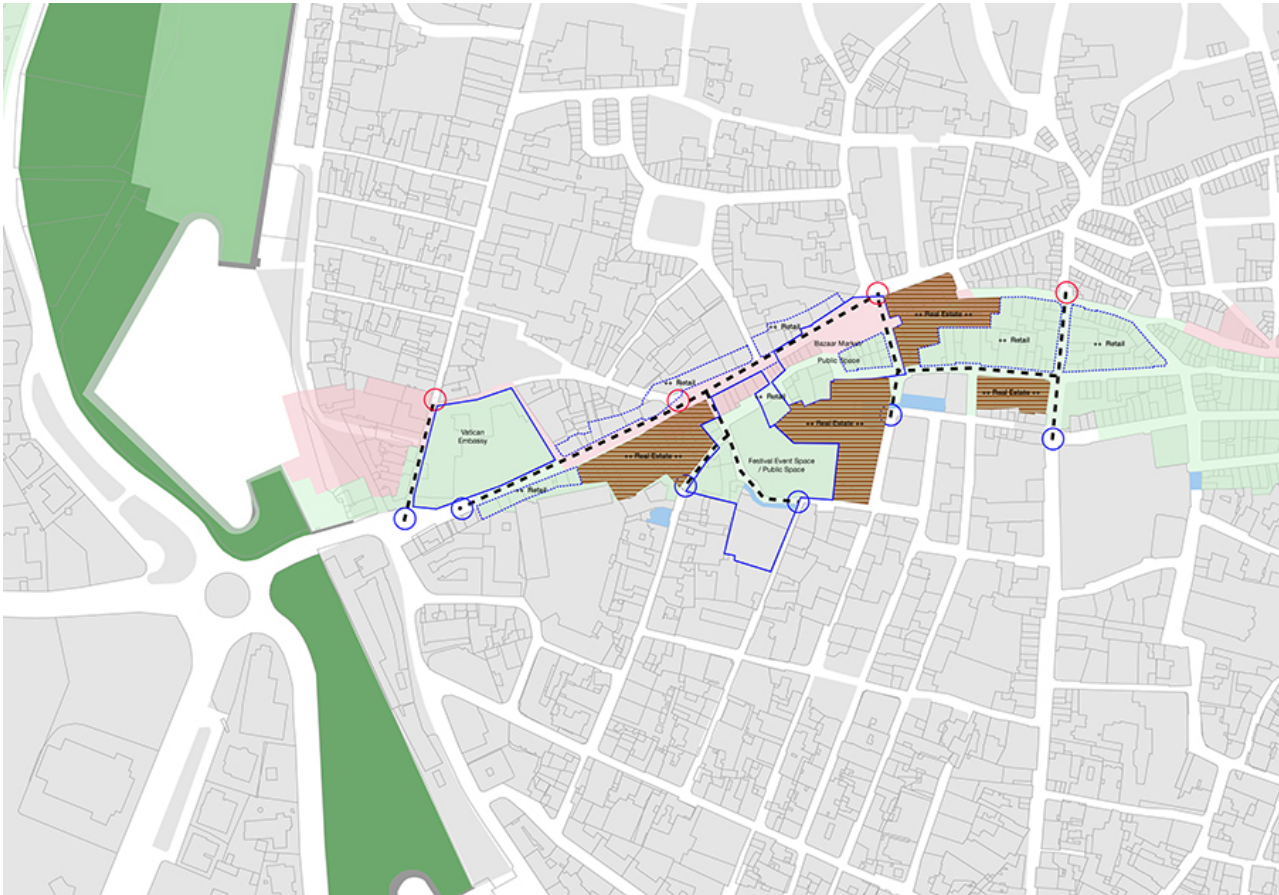


Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.

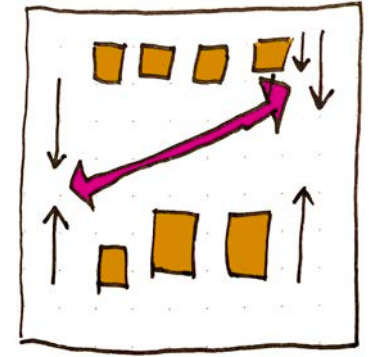
Nicosia, Cyprus. May 2019

Urban Design

Create a centre. Green Line changes



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Create a shared Centre

New centre

One new gate

Neutral space

Co-developed



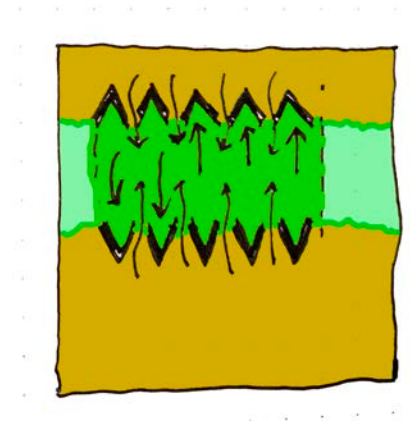
Nicosia, Cyprus. May 2019

Urban Design

Create a centre. Green Line changes. Airline pass



Urban desig



Create a centre

Airport pass

All cypriots

Tourists pay in advance

One side or both side clearance

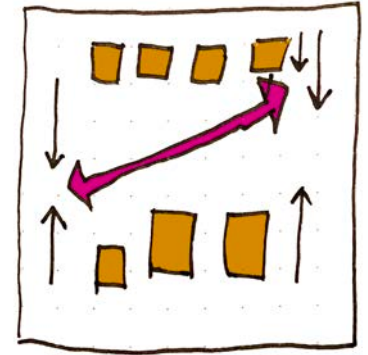


Nicosia, Cyprus. May 2019

Urban Design

Create a centre. Green Line changes

From



The Bazaar

New centre

One new gate

Neutral space

Co-developed



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.

Nicosia, Cyprus. May 2019

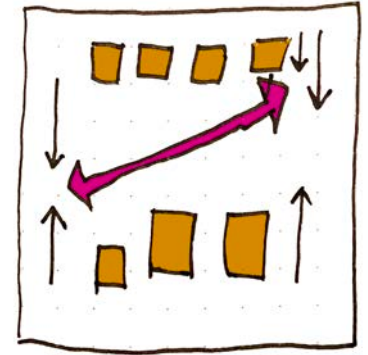
Urban Design

Create a centre. Green Line changes

To



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



The Bazaar

New centre

One new gate

Neutral space

Co-developed



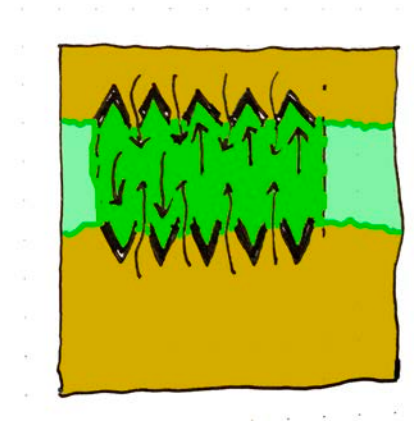
Nicosia, Cyprus. May 2019

Urban Design

Green line moves Central zone. Ledra Street westwards.



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Green line detail

Check-in to zone

Airport gate... register
in advance

Seamless check in and
out



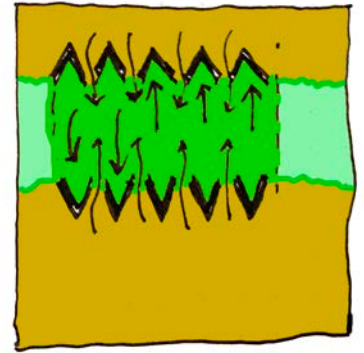
Nicosia, Cyprus. May 2019

Urban Design

Green line moves Central zone. Ledra Street westwards.



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Green line detail

Check-in to zone

Airport gate... register
in advance

Seamless check in and
out



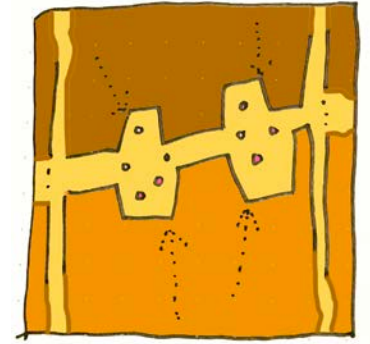
Nicosia, Cyprus. May 2019

Urban Design

Green line moves
New streets, New square.



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



New shared centre

New streets

Shared heritage



Nicosia, Cyprus. May 2019

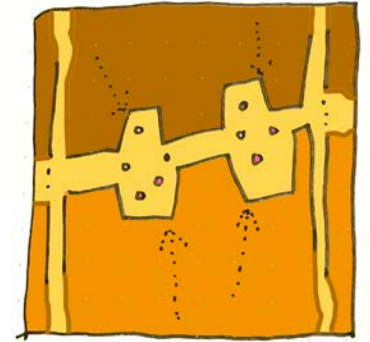
Urban Design

Green line moves

New street



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



New shared centre

New streets

Global/Local
infrastructure



Nicosia, Cyprus. May 2019

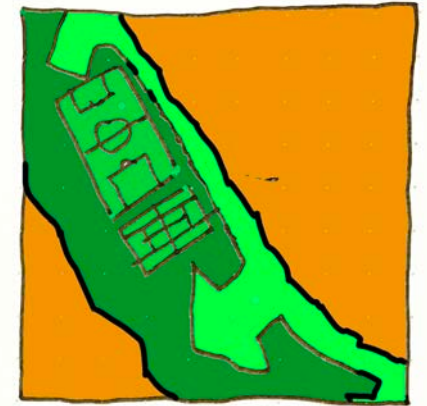
Urban Design

Green line moves

New Sports place.



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



New shared centre

Shared sports in
between the
bastions....

Click in/Click out



Nicosia, Cyprus. May 2019

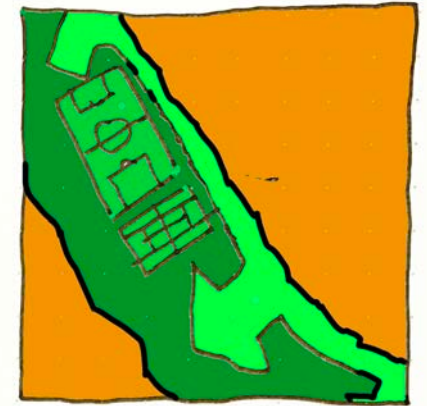
Urban Design

Green line moves

New Sports place.



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



New shared centre

Shared sports in
between the
bastions....

Click in/click out



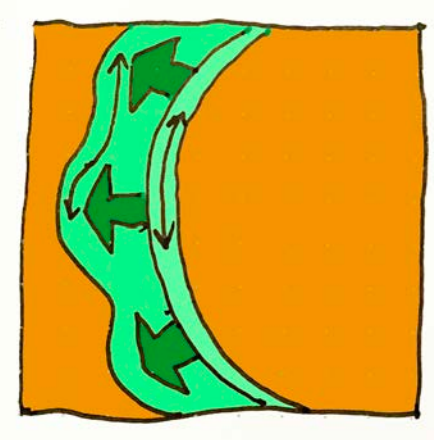
Nicosia, Cyprus. May 2019

Urban Design

The Green ring.....



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



New green park

Sports

Cycle routes

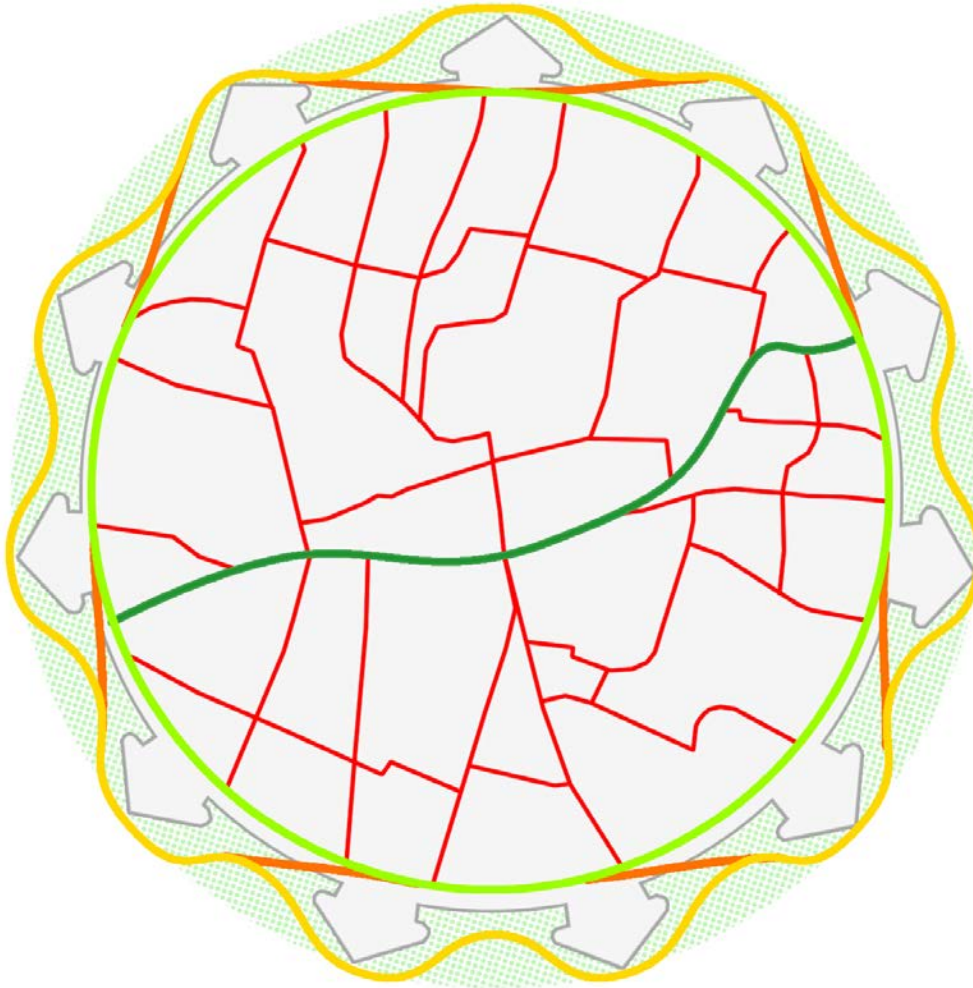
Tree nursery

Climate protection



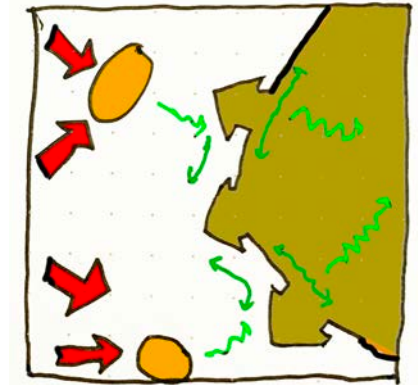
Nicosia, Cyprus. May 2019

Urban Design



Remove the car from the centre

Use the Bastions and moat as a park



Car removal

- reduced intensity
- Everyone exercises
- Shaded routes
- Lower temperatures

Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Nicosia, Cyprus. May 2019

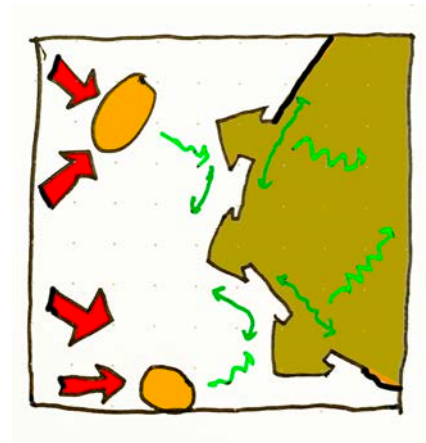
Urban Design

Car removal

Park and Ride (a bike) or walk



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Car removal

reduced intensity

Everyone exercises

Shaded routes

Lower temperatures



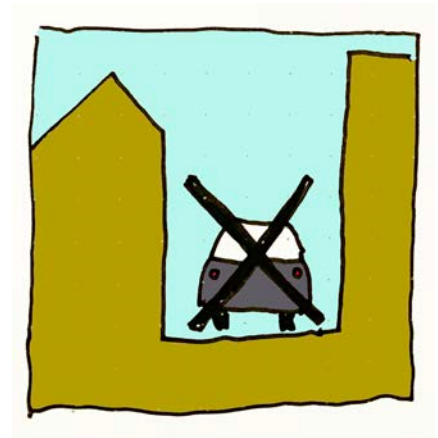
Nicosia, Cyprus. May 2019

Urban Design

Car removal inside the ring



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Car removal

Inner city changes

People first

Green
infrastructure



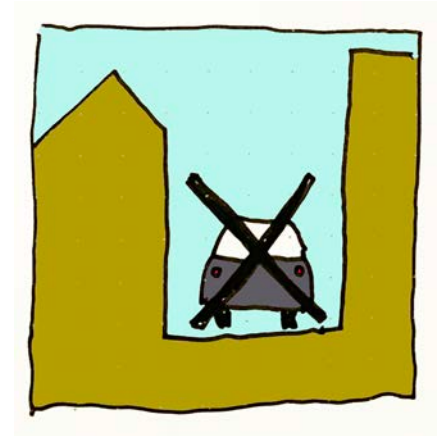
Nicosia, Cyprus. May 2019

Urban Design

Car removal inside the ring
Creates people space



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Car removal

Inner city changes

People first

Green
infrastructure



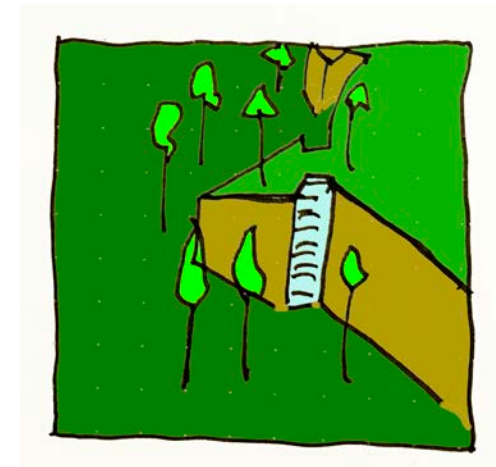
Nicosia, Cyprus. May 2019

Urban Design

The Bastion park



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



The Bastion Park

Increased green

New infrastructure

Energy/mobility/social

Tourist/heritage
enabling



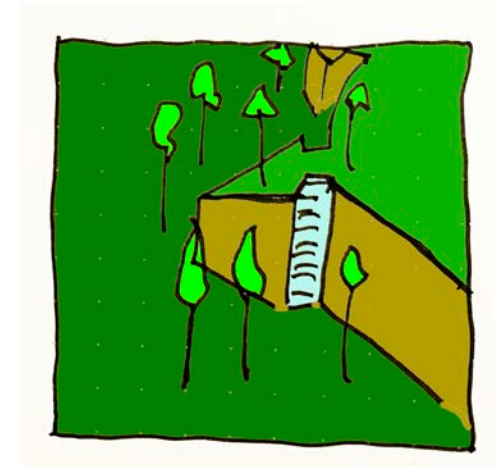
Nicosia, Cyprus. May 2019

Urban Design

The Bastion park



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



The Bastion Park

- Increased green
- New infrastructure
- Energy/mobility/social
- Tourist/heritage enabling



Nicosia, Cyprus. May 2019

Urban Design

The Bastion Park



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



The Bastions

- Increased green
- New infrastructure
- Energy/mobility/social
- Tourist/heritage enabling



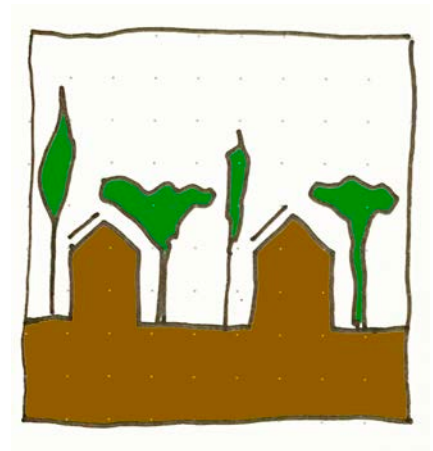
Nicosia, Cyprus. May 2019

Urban Design

City as forest

Hide the city in a forest

Hide a forest in the city.....



City as forest

Increased intensity

Community services

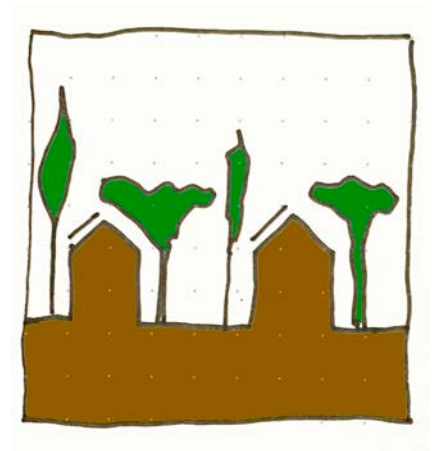
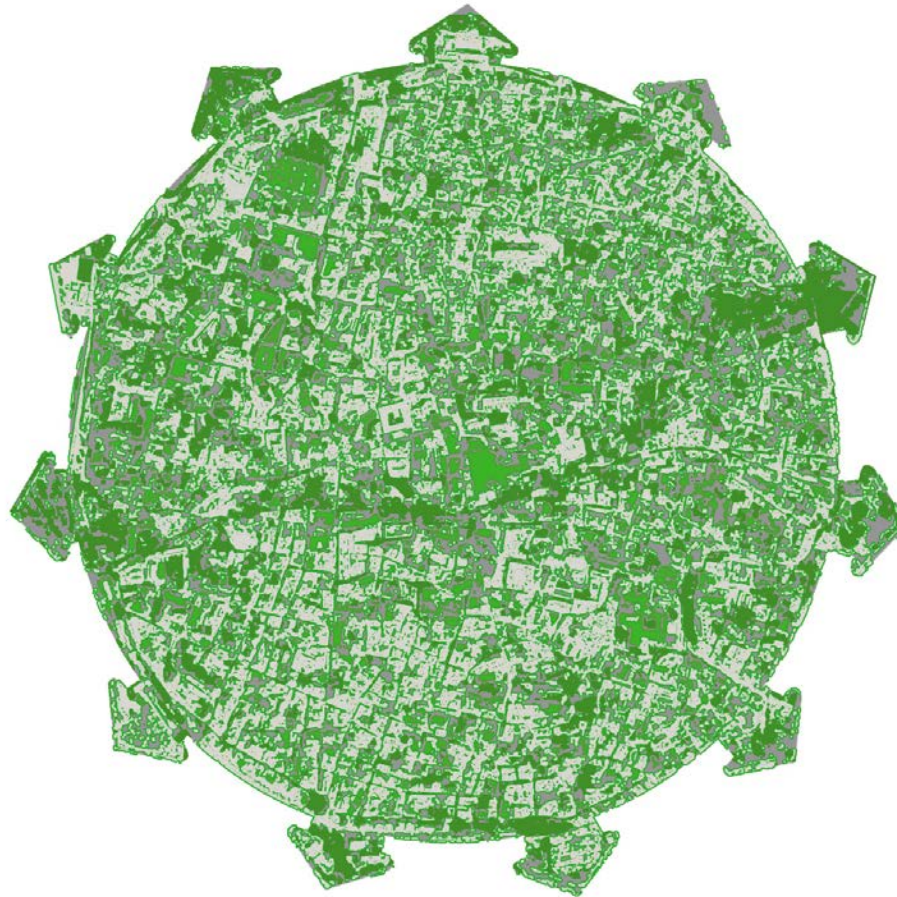
Increased density

Reason to visit



Urban Design

Green the city



City as forest

Increased intensity

Community services

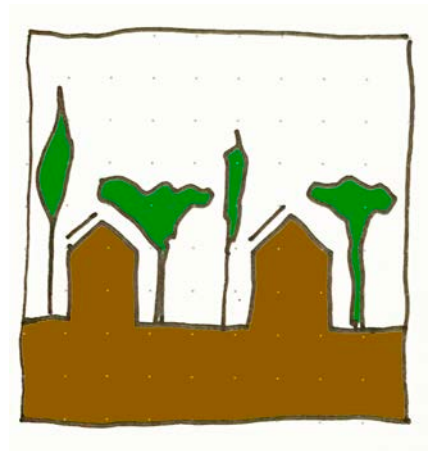
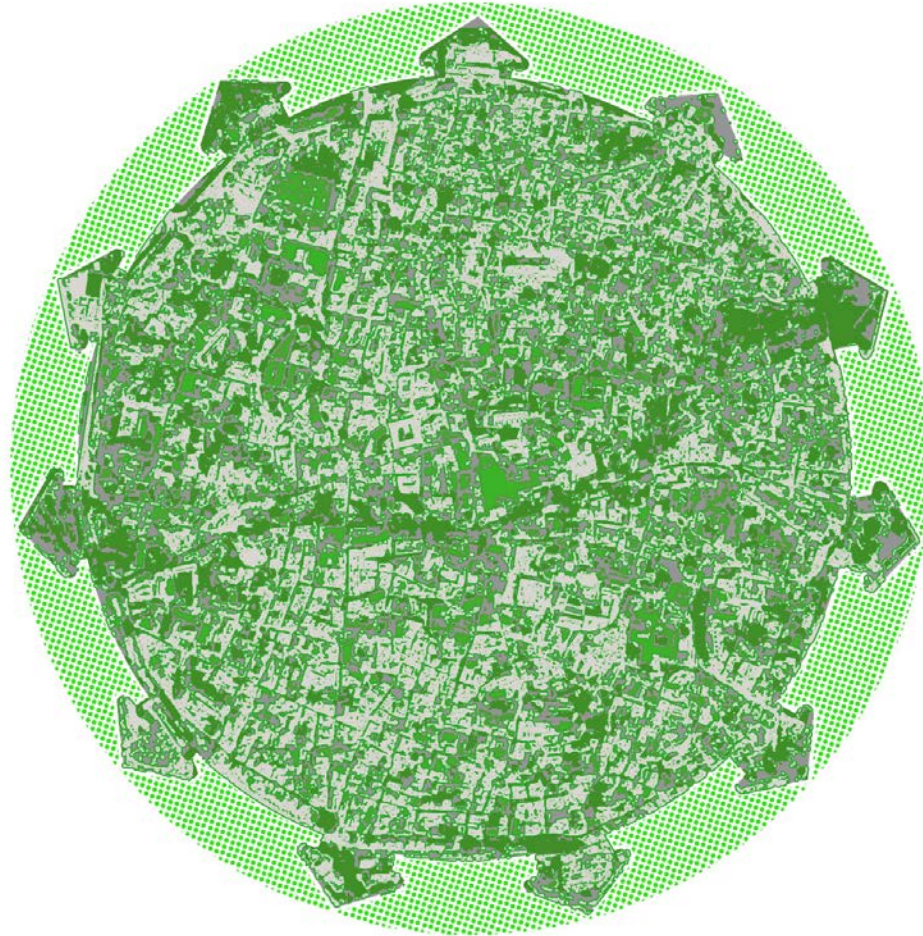
Increased density

Reason to visit



Urban Design

Green the Bastions



City as forest

Increased intensity

Community services

Increased density

Reason to visit



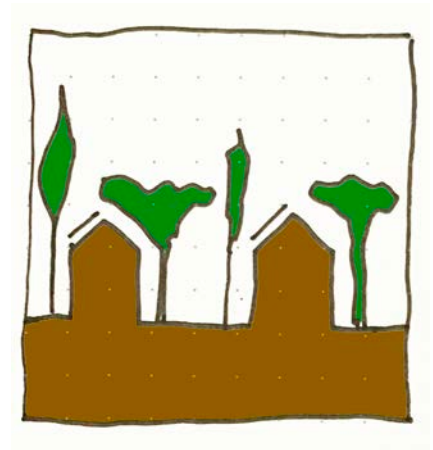
Urban Design

City as forest

Hide the city in a forest –
Hide a forest in the city.....



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



City as forest

Increased intensity

Community
services

Increased density

Reason to visit



Nicosia, Cyprus. May 2019

Urban Design

City as forest

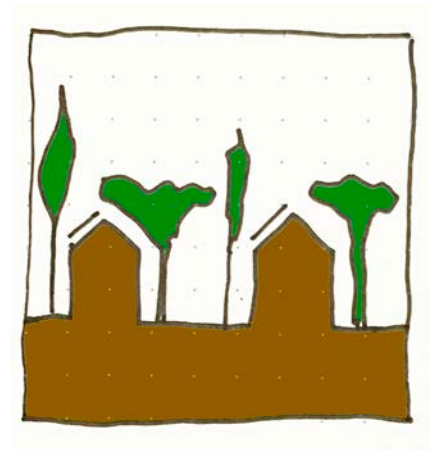
Hide the city in a forest –

Hide a forest in the city.....

Greywater facades



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



City as forest

Increased intensity

Community
services

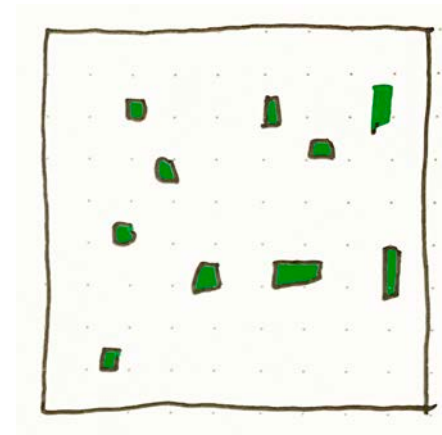
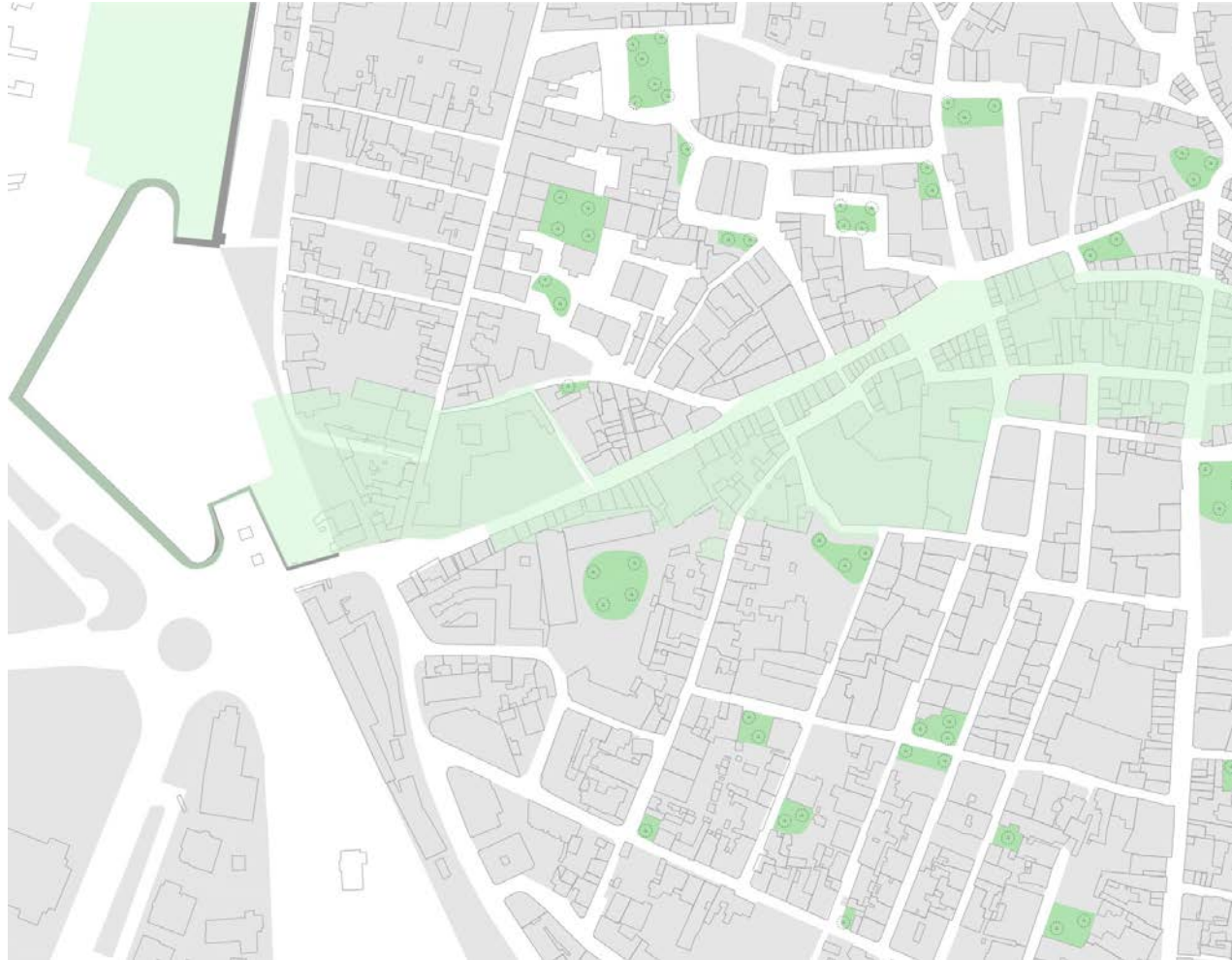
Increased density

Reason to visit



Nicosia, Cyprus. May 2019

Urban Design



Pocket parks

Re-purpose car-parks.

New 100m infrastructure that reduces heat island effect



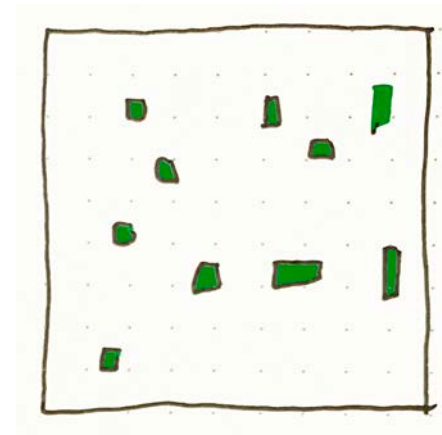
Urban design strategy: Prof Greg Keffe, Queens University, Belfast.

Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Pocket parks

Re-purpose car-parks.

New 100m infrastructure that reduces heat island effect

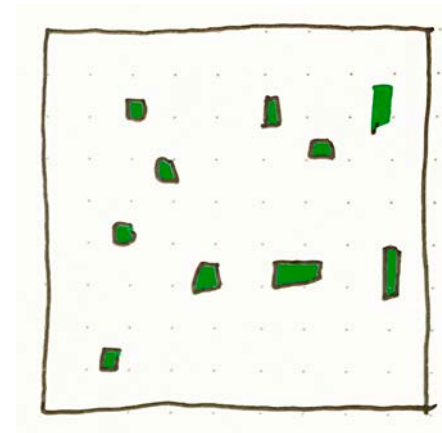


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Pocket parks

Re-purpose car-parks.

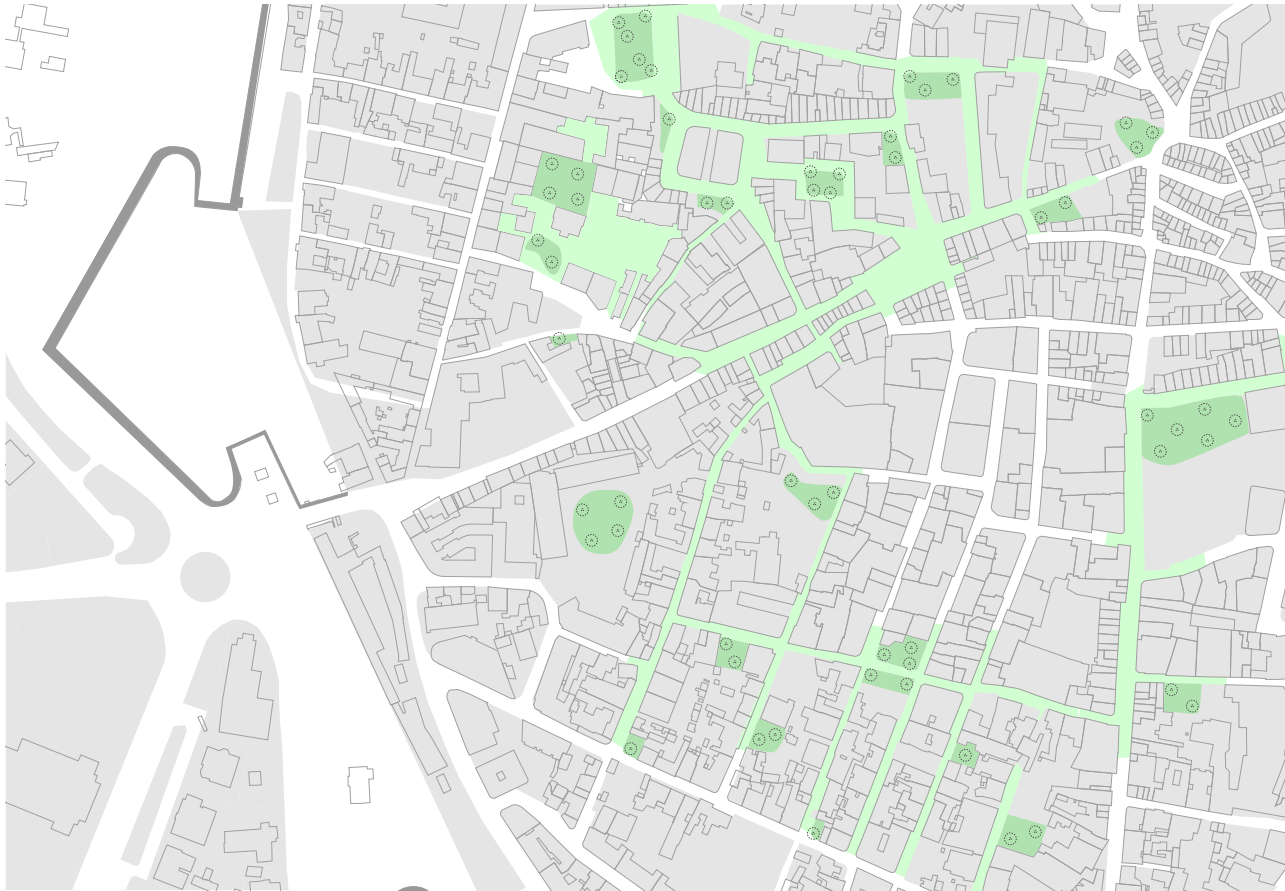
New 100m infrastructure that reduces heat island effect



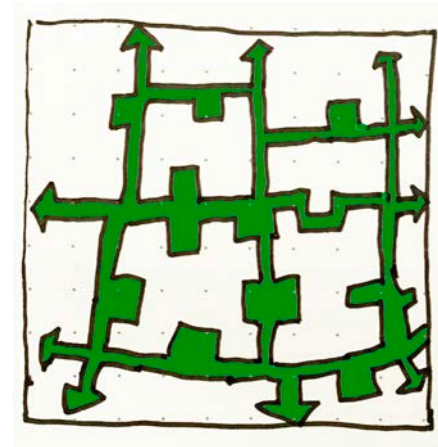
Nicosia, Cyprus. May 2019

Urban Design

Green network



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Green Network

Connect inner-city
Pocket parks.

Make shaded
network of places
to walk

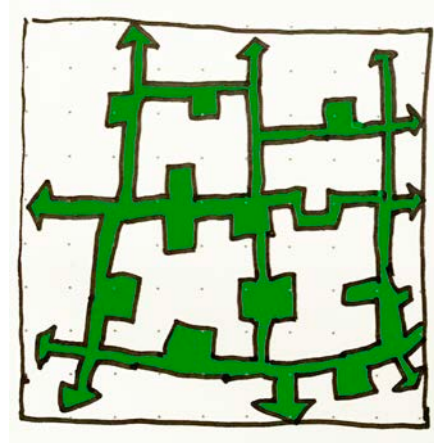


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.



Green Network

Connect inner-city
Pocket parks.

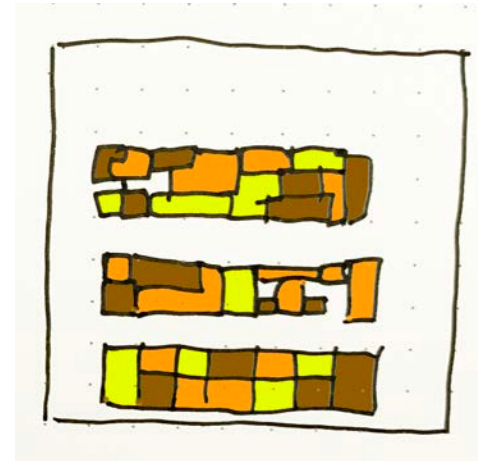
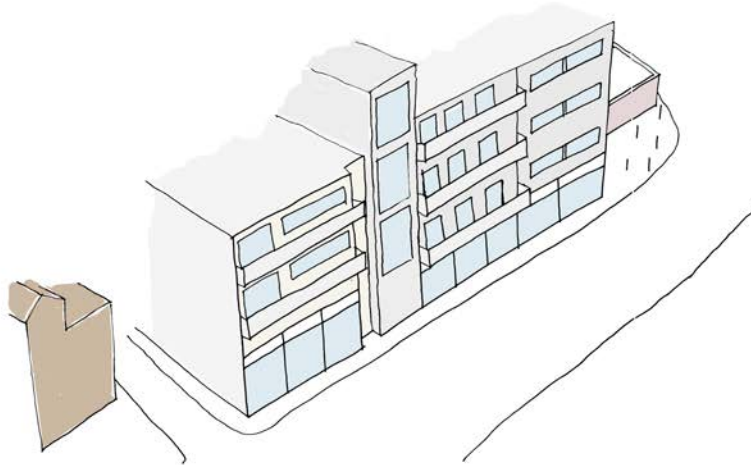
Make shaded
network of places
to walk



Nicosia, Cyprus. May 2019

Urban Design

Densification - south



Densification

Increased density

Increased intensity

More shade

Better community
services

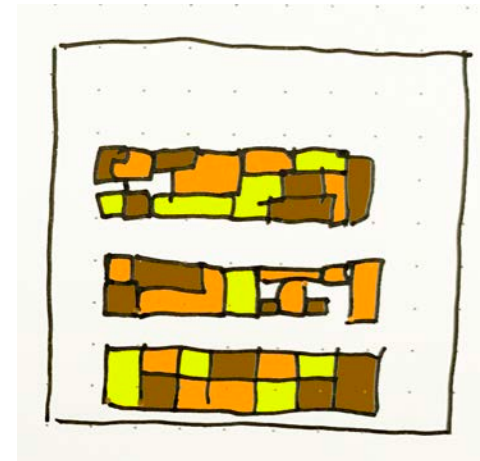


Urban Design

Densification + greening



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Densification

Increased density

Increased intensity

More shade

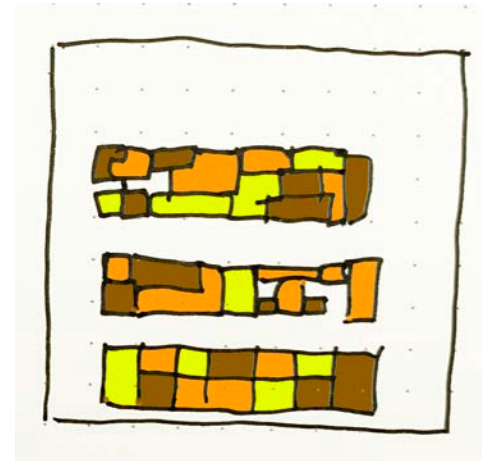
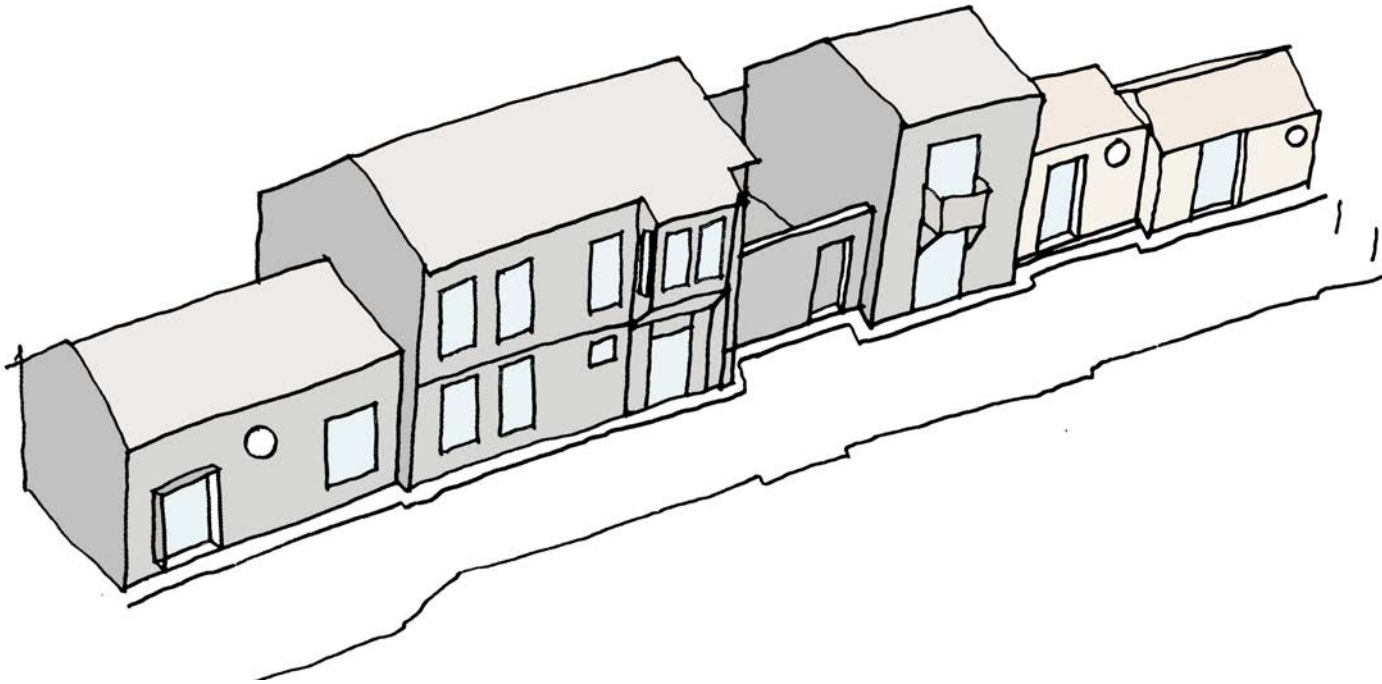
Better community
services



Nicosia, Cyprus. May 2019

Urban Design

Densification North



Densification

Increased density

Increased intensity

More shade

Better community services

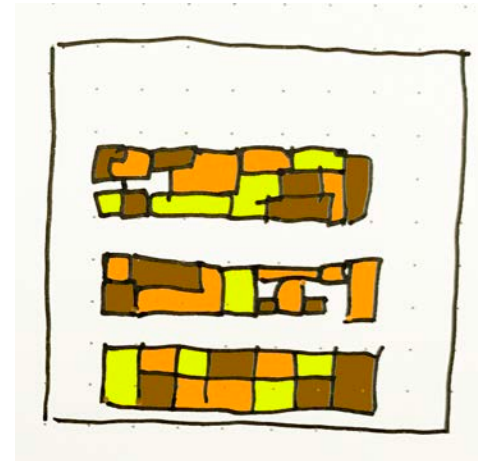


Urban Design

Densification and greening



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Densification

- Increased density
- Increased intensity
- More shade
- Better community services

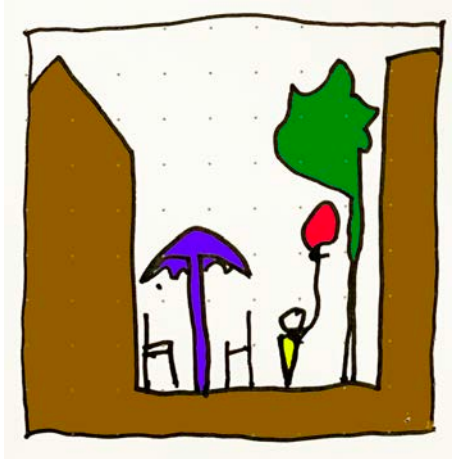


Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Re-invent the street

Reclaim territory
from the car

New community

Increased intensity



Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Re-invent the street

Reclaim territory
from the car

New community

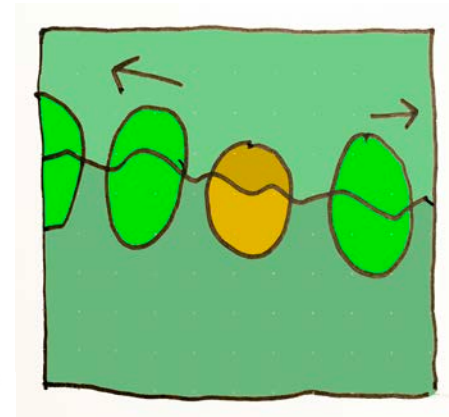
Increased intensity



Nicosia, Cyprus. May 2019

Urban Design

Climate sequestration... grow the forest in the city and plant it out.....



Climate sequestration

World issue

Do your share

1.2 million trees per year for a century

100 cities.....



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.

Nicosia, Cyprus. May 2019

Urban Design



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.

Mustafa Ozan

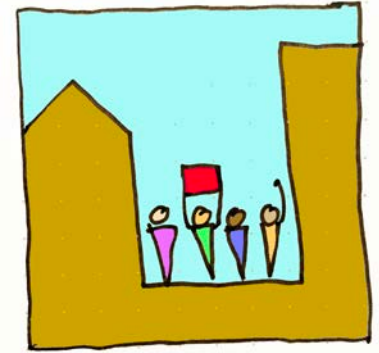
“Hi, I’m Mustafa,

I lived and worked within the walls of Nicosia all my life and run my own business creating hand crafted belts, and bags. The new co-community bazaar in the Green zone, has allowed me to connect better with more customers and especially tourists.

Since pedestrianisation and the electric car share facility I have found the city to be much safer for my children, I too feel so much healthier, and happier and I’ve found that I have met many new people and made new friends, as I no longer confine myself to my car.

The new car share at the city walls has allowed me to use different vehicles when I need them. I can now get a van when I need to collect materials and a campervan for the family trips at the weekend

I was sceptical at first but I feel the changes in the city have really improved my quality of life.”



Pen picture 1

Keep it local



Nicosia, Cyprus. May 2019

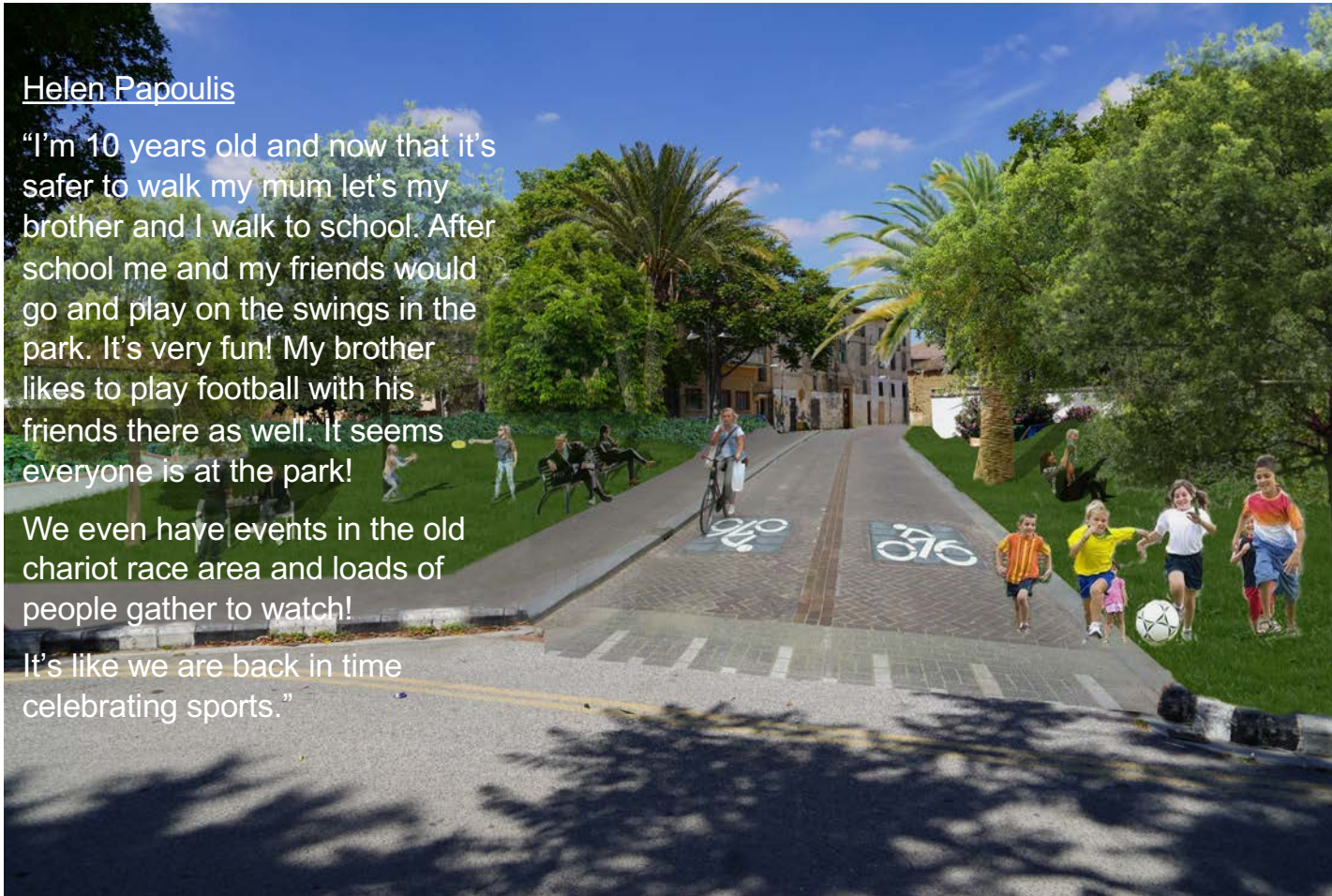
Urban Design

Helen Papoulis

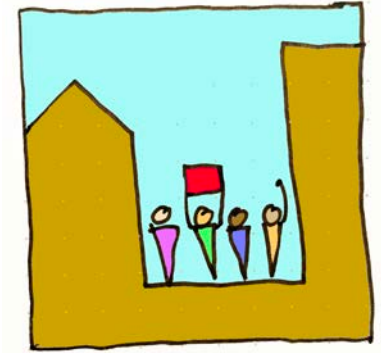
“I’m 10 years old and now that it’s safer to walk my mum let’s my brother and I walk to school. After school me and my friends would go and play on the swings in the park. It’s very fun! My brother likes to play football with his friends there as well. It seems everyone is at the park!

We even have events in the old chariot race area and loads of people gather to watch!

It’s like we are back in time celebrating sports.”



Urban design strategy: Prof Greg Keeffe, Queens University, Belfast.



Pen picture 2

Kids deserve a better future



Nicosia, Cyprus. May 2019

Urban Design

Ela Sari

“Hello, my name is Ela,

My family home is in the suburbs of Nicosia. I spend much of my time within the walls of the city as my children go to school there and I work as an architect in the walls.

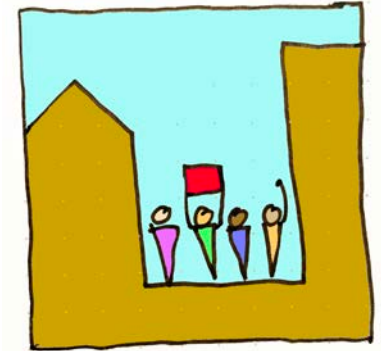
I can take the kids after School to the Park. There's more wildlife within the city walls now, and the city air also seems to be easier to breath and cleaner.

My new P.V. panels on my roof have drastically decreased are energy bills making it possible for us to now afford more meals out, and the ability to go do activities with the kids means a less stressful life. I feel the changes to Nicosia have really made mine and my children's lives better.

I now cycle to work every day from outside the walls using the bike share and really enjoy it. We are now considering, when the kids are older ,moving into the walled city to get more out of the new streets and parks.”



Urban design strategy: Prof Greg Keffe, Queens University, Belfast.

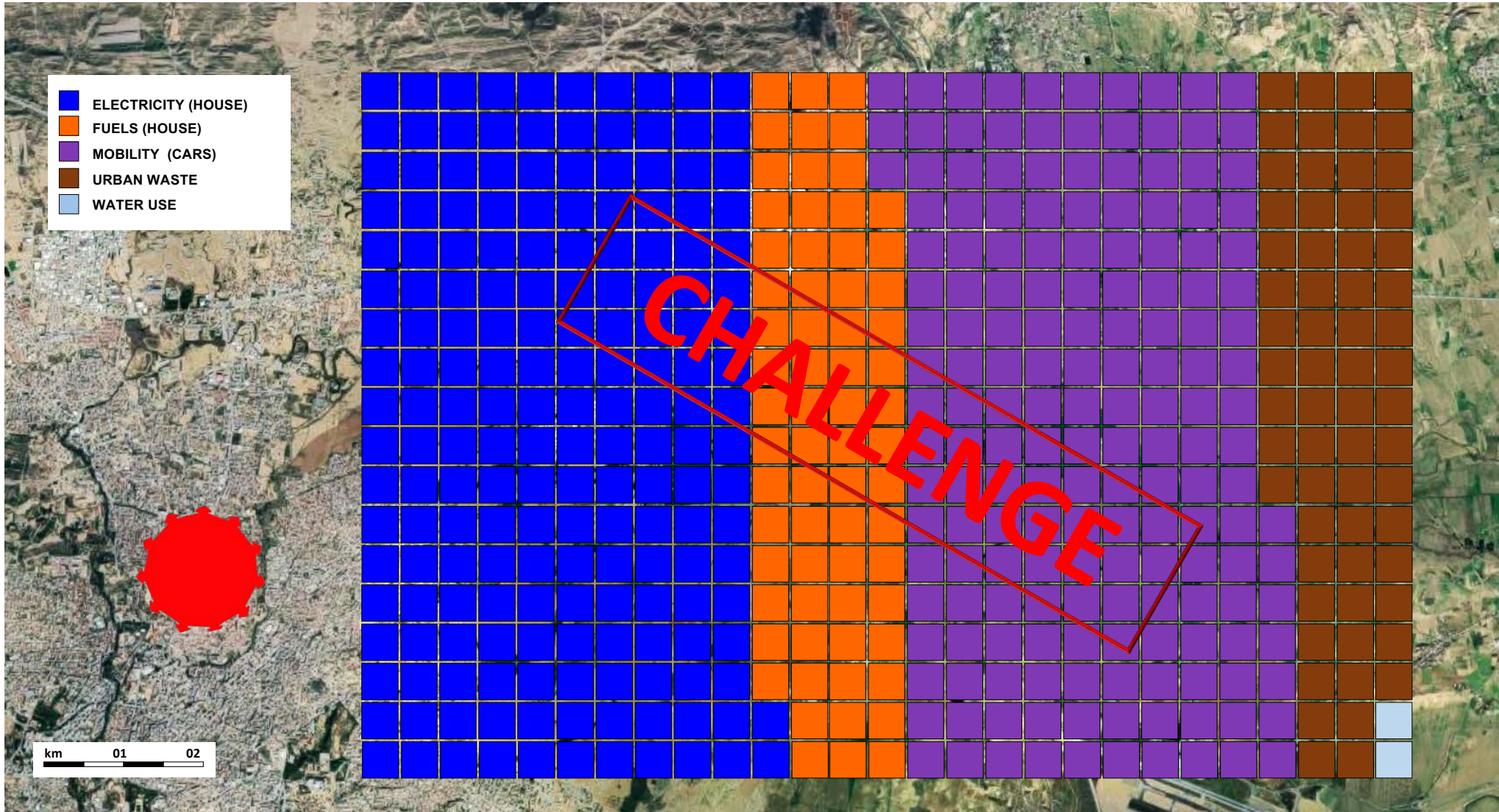


Pen picture 3

Help the commuter



Nicosia, Cyprus. May 2019



3 ...

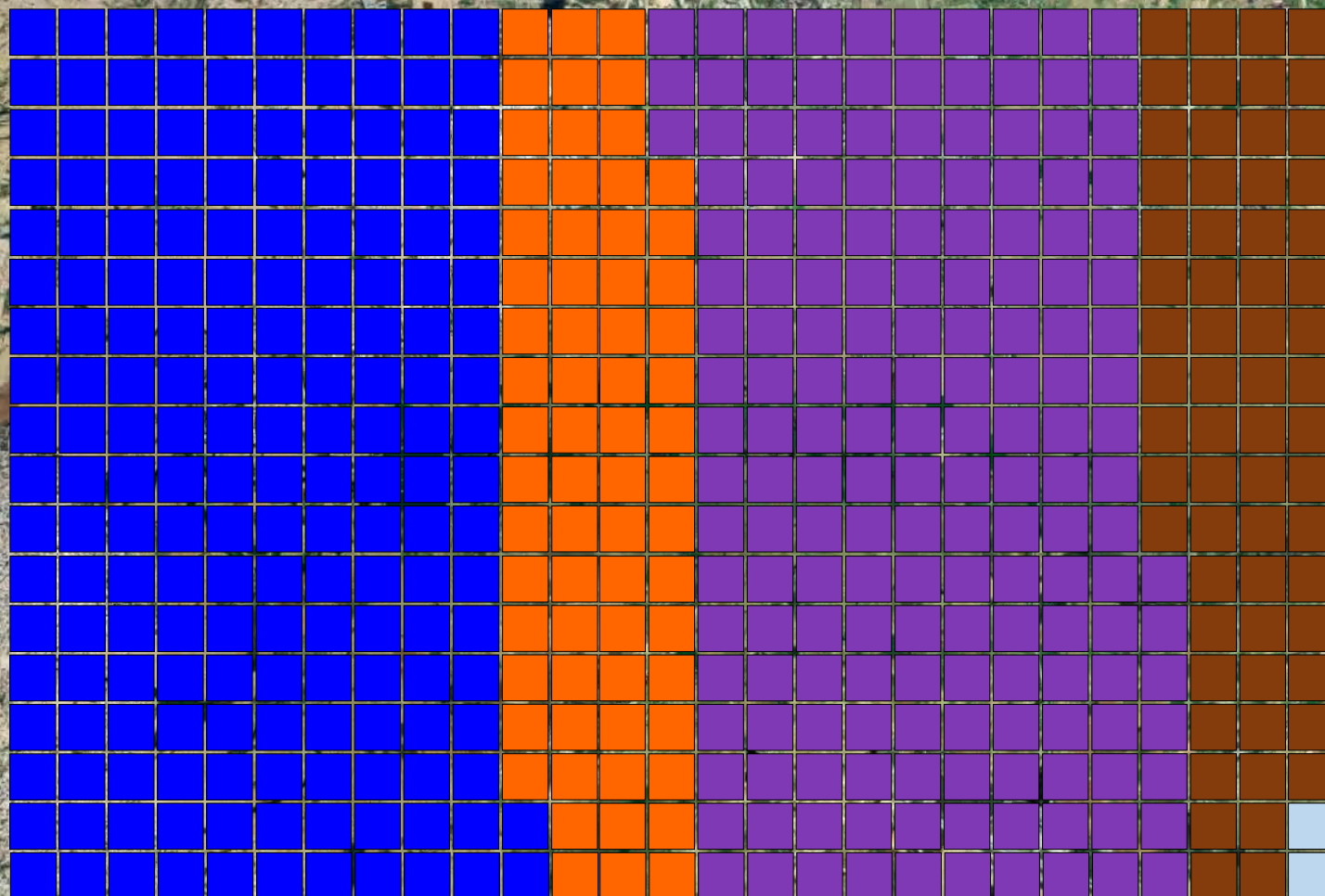
2 ...

1 ...

... GO!



km 01 02





ENERGY SAVING

PASSIVE SYSTEMS,
GREENERY, SHADING, LED

70% households

-30% cooling energy

-30% lighting energy

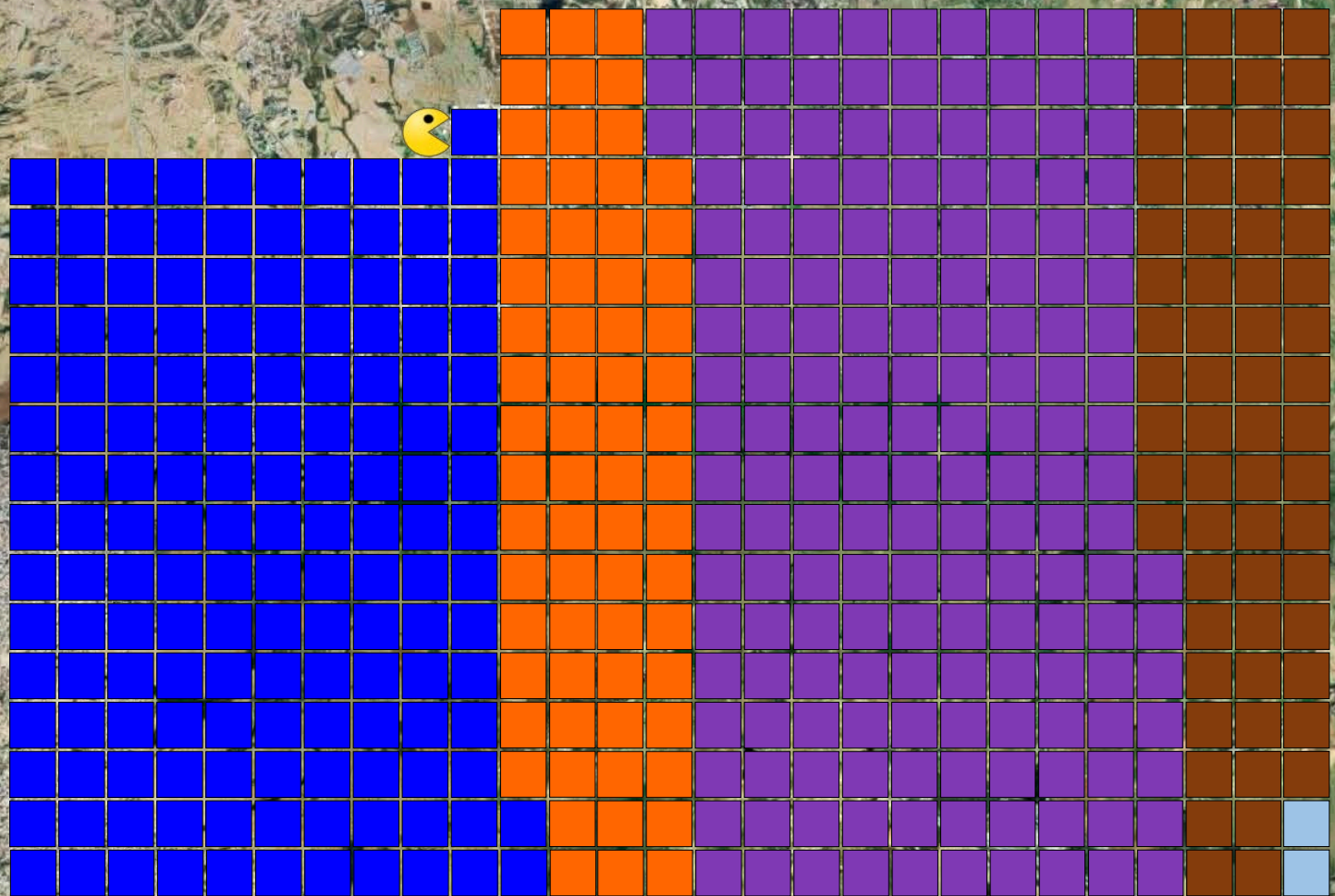
=

-14 GWh electricity



km 01 02

1





ENERGY SAVING

INSULATION, DOUBLEGLASS

70% households

-15% cooling energy

-30% heating energy

=

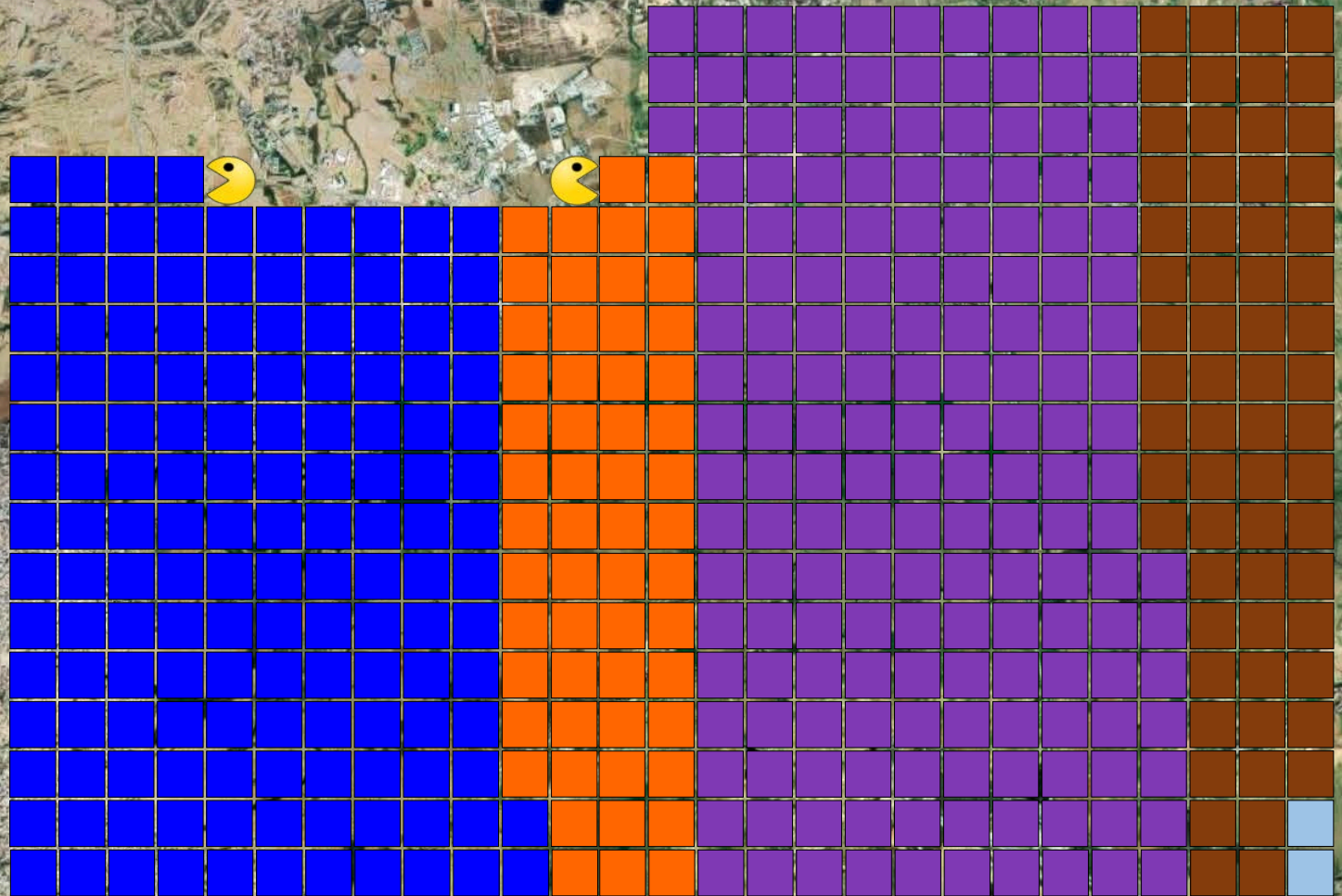
-3 GWh electricity

-15 GWh heat



km 01 02

2





AVOIDED CARS

PUBLIC TRANSPORT

30% households

-100% car use

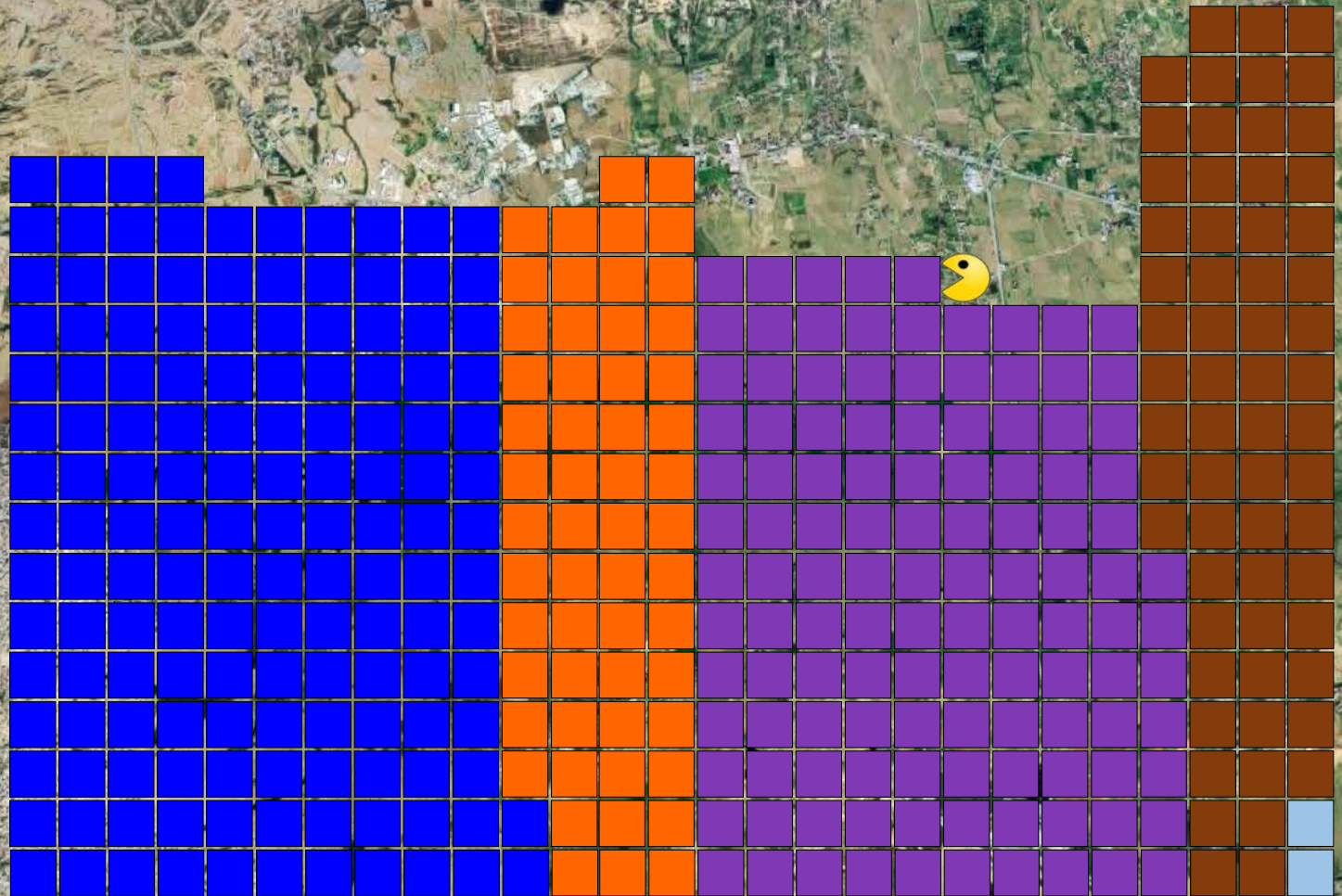
=

-100,000 km driven



km 01 02

3



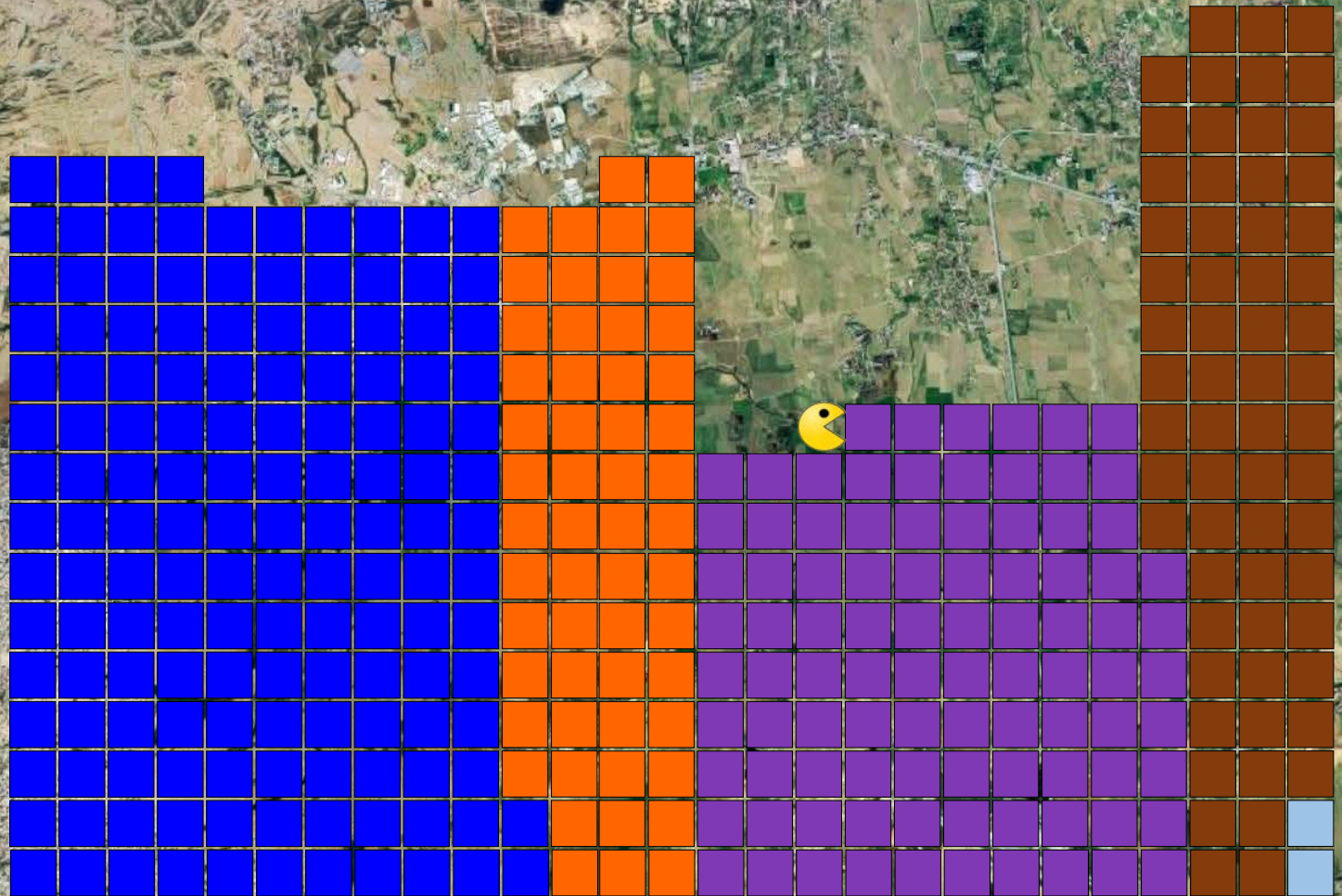


AVOIDED CARS
WALK/BIKE
TO SCHOOL/WORK
30% households
-50% car use
=
- 50,000 km driven



km 01 02

4





WASTE MANAGE.

WASTE REDUCTION

LESS DISPOSAL

100% households

-16 kt/yr landfill (-90%)

+9 kt/yr recycled

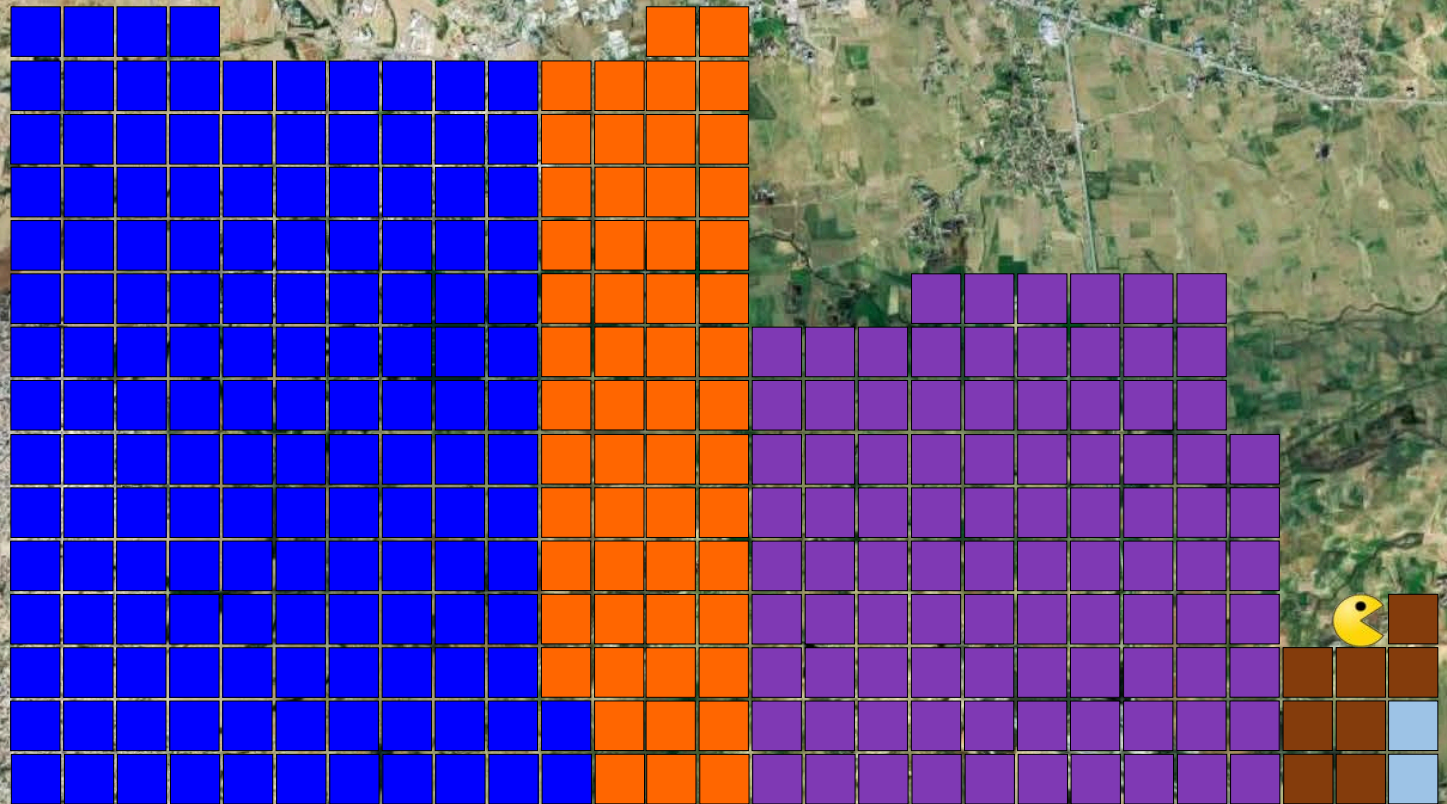
+5 kt/yr organic

-2 kt/yr produced



km 01 02

5





WATER SAVING

WATER HARVESTING

100% households

-40% saving

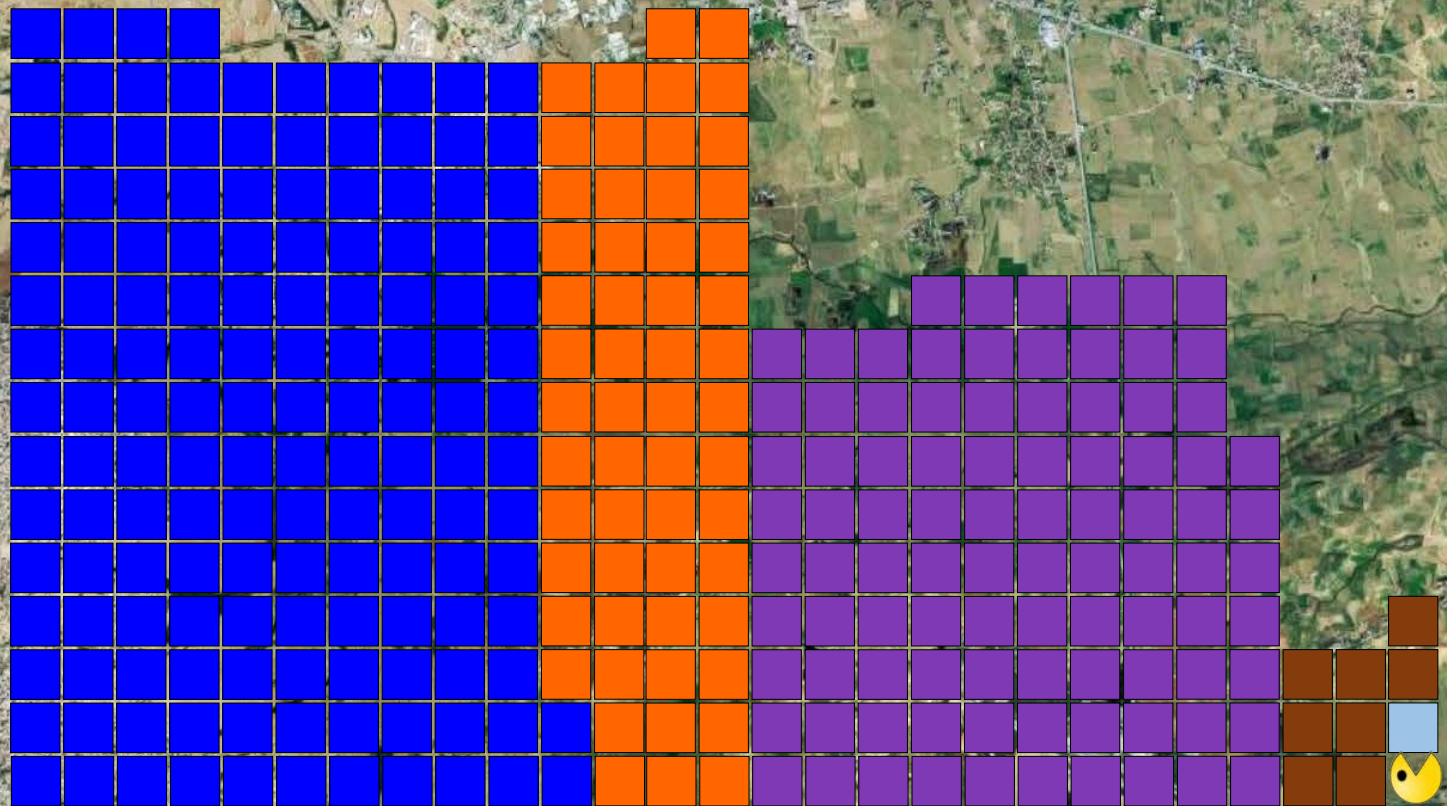
=

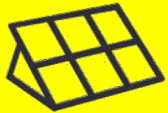
- 500,000 m³



km 01 02

6





RES HEAT SUPPLY

HT SINGLE SOLAR
COLLECTORS

60% households

=

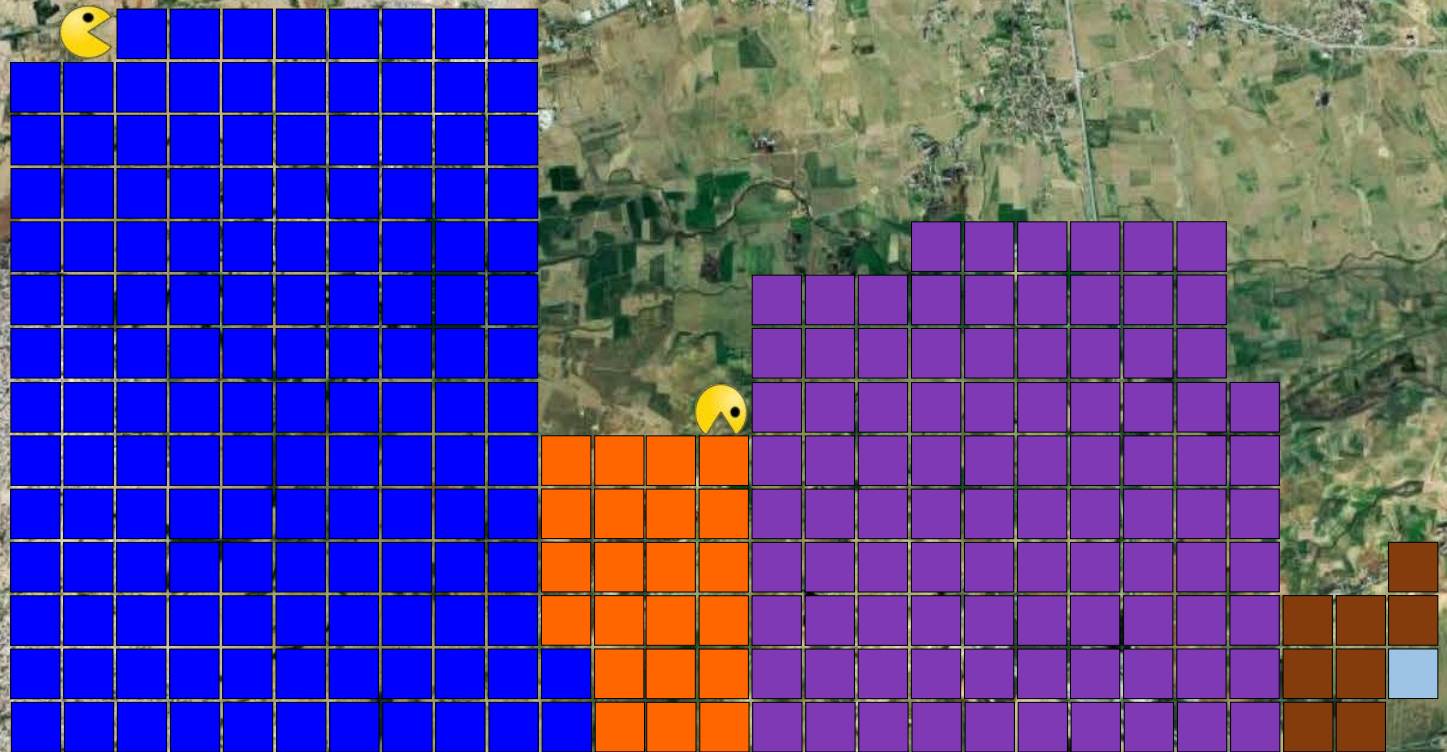
-45 GWh space & water heat

-3 GWh s&w electricity



km 01 02

7





RES HEAT SUPPLY

MT SHARED SOLAR

COLLECTORS + HEAT PUMPS

20% households

=

-15 GWh space & water heat

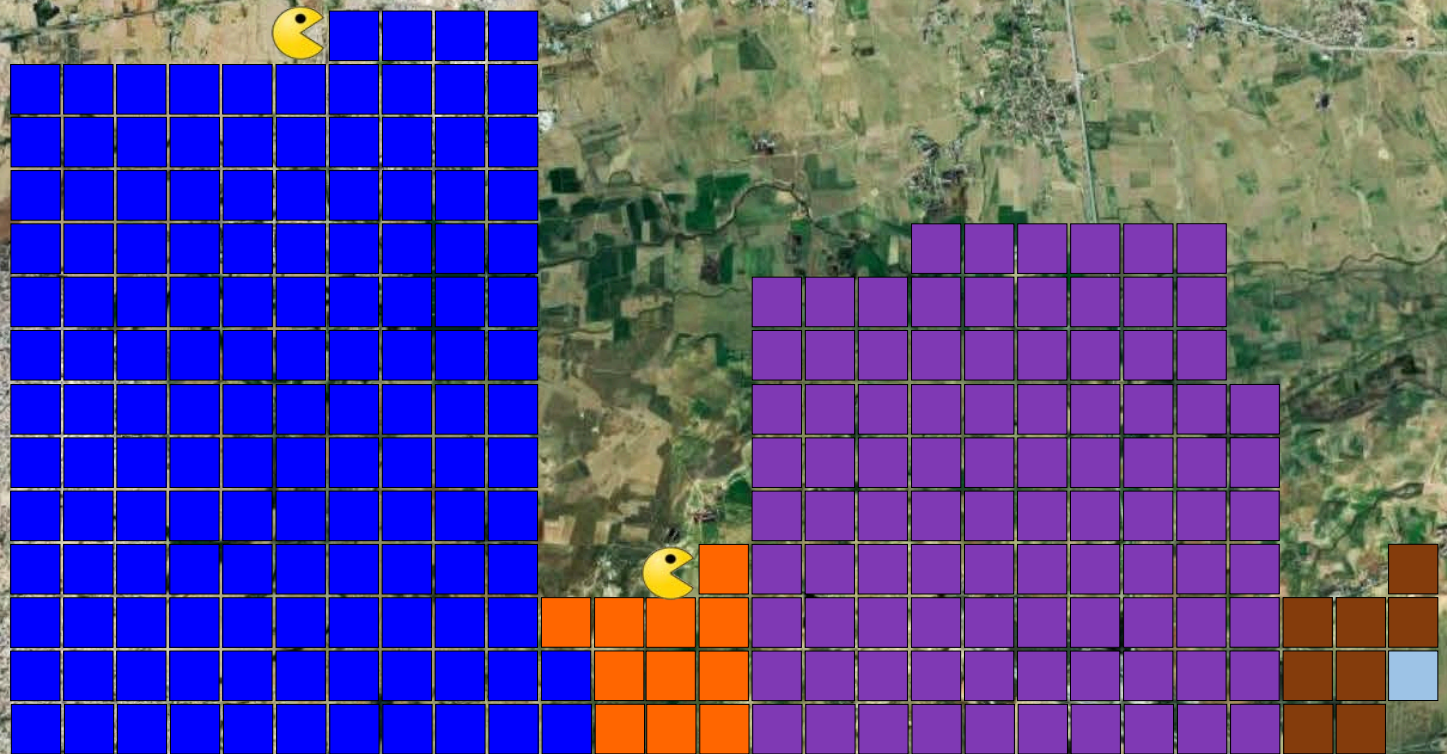
-6 GWh s&w electricity

+ 4 MWh electricity (CoP 4)



km 01 02

8





RES HEAT SUPPLY

LT AQUIFER STORAGE + HEAT PUMPS

20% households

=

-15 GWh space & water heat

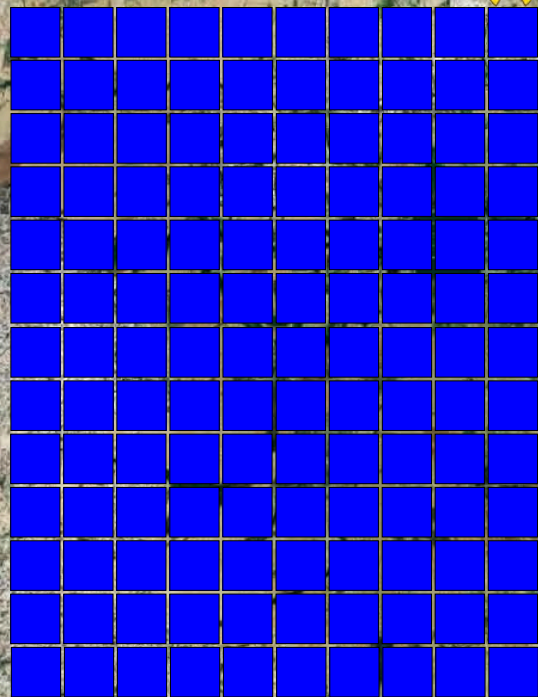
-6 GWh s&w electricity

+ 4 MWh electricity (CoP 4)



km 01 02

9





RES ELECTRICITY

PV ON ROOFS + BATTERIES

60% households

52 GWh electric generation

(174,000 m²)

Area ring = 1.54 km²

Total roof surface = 0.88 km²

Available ¼ PV roofs = 0.22 km²

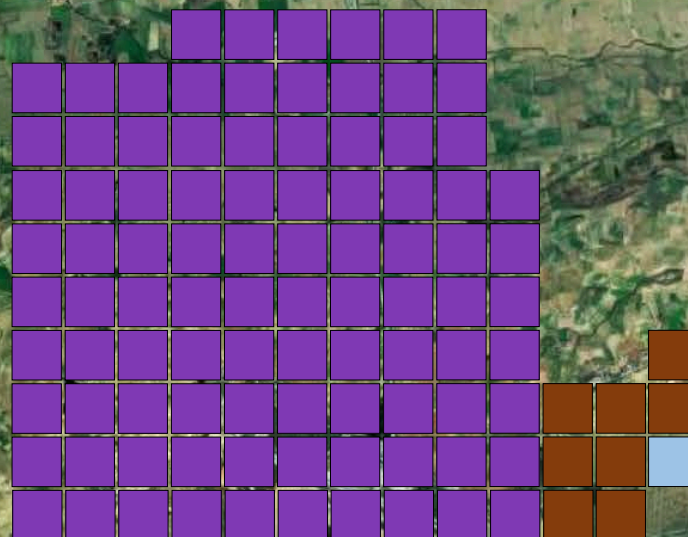
Avg 300 kWh/m² (includes loss)

Total PV potential = 66 GWh



km 01 02

10





RES ELECTRICITY

Vertical PV

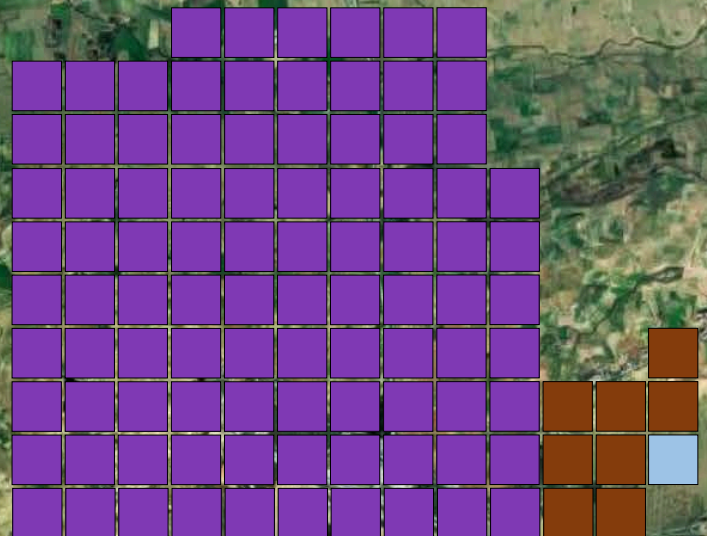
10% households

8 GWh electric generation



km 01 02

11





TRANSITION TO ELECTRIC MOBILITY

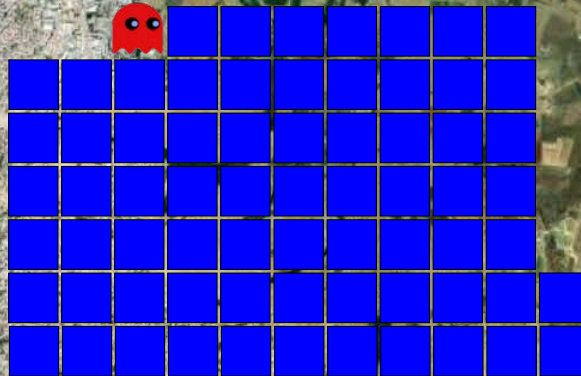
100% cars

32 GWh increased electricity



km 01 02

12





RES ELECTRICITY

Shared PV (canopies)

32 GWh electric generation
(107,000 m²)

e.g.

14 GWh on roofs

18 GWh on canopies



km 01 02

13





**URBAN FORESTRY
CARBON UPTAKE**

230 hectares forest

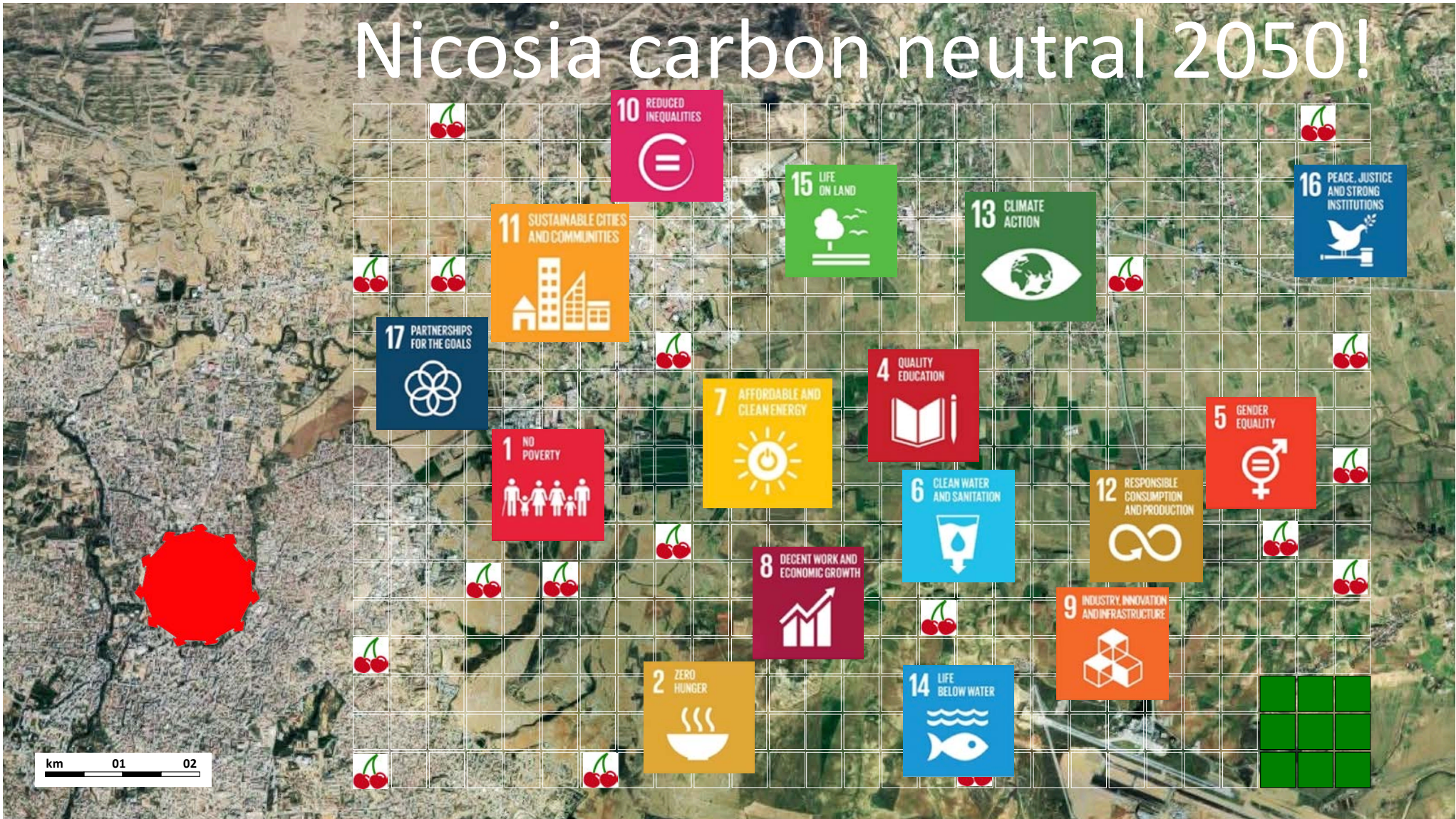


km 01 02

14



Nicosia carbon neutral 2050!



Where next? 13:30 – 13:45

- Amersfoort SWAT September 2019 (Done!). 4 Sites, 21 Masters students, 2-weeks.
- Amersfoort Roadshow October 2019...

AD News Region Sport Show

Almelo Alphen Amersfoort Amsterdam Apeldoorn Arnhem

PREMIUM

In the foreground Craig Martin (l) and Jo Pieters (r) with the group of TU Delft students. © Nico Brons.

Major research into energy-neutral neighborhoods in Amersfoort

European Commission

CITY-zen ROADSHOW

Where next? 13:30 – 13:45

- Amersfoort SWAT September 2019 (Done!). 4 Sites, 21 Masters students, 2-weeks.
- Amersfoort Roadshow October 2019...



Presented by Prof. Dr. Craig Lee Martin (TU Delft / UCLan)
City-zen Roadshow Leader email: C.L.Martin@tudelft.nl



Where next? 13:30 – 13:45

1: PLAYGROUND (before)



1: PLAYGROUND (after)



- | | | | | | | | |
|------------------------|----------------------|---------------------|---------------|-------------------------------|-------------------|---------------|--------|
| ENVIRONMENTAL BENEFITS | | | | SOCIAL BENEFITS | | | |
| | | | | | | | |
| CARBON FOOTPRINT | IMPROVED AIR QUALITY | EFFICIENT WATER USE | FOOD SECURITY | INTERGENERATIONAL INTERACTION | INCREASED FITNESS | MENTAL HEALTH | HEALTH |

1: PLAYGROUND (technology applied)



5: COMMERCIAL STREET (before)



5: COMMERCIAL STREET (after)



- | | | | | | | | |
|------------------------|----------------------|---------------------|---------------|-------------------------------|-------------------|---------------|--------|
| ENVIRONMENTAL BENEFITS | | | | SOCIAL BENEFITS | | | |
| | | | | | | | |
| CARBON FOOTPRINT | IMPROVED AIR QUALITY | EFFICIENT WATER USE | FOOD SECURITY | INTERGENERATIONAL INTERACTION | INCREASED FITNESS | MENTAL HEALTH | HEALTH |

4: READING (before)



4: READING (after)



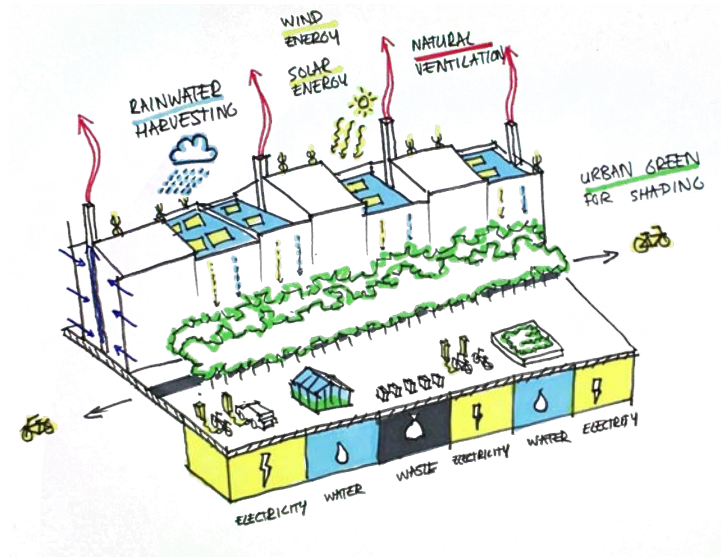
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|------------------------|----------------------|---------------------|---------------|-------------------------------|-------------------|---------------|--------|
| ENVIRONMENTAL BENEFITS | | | | SOCIAL BENEFITS | | | |
| | | | | | | | |
| CARBON FOOTPRINT | IMPROVED AIR QUALITY | EFFICIENT WATER USE | FOOD SECURITY | INTERGENERATIONAL INTERACTION | INCREASED FITNESS | MENTAL HEALTH | HEALTH |

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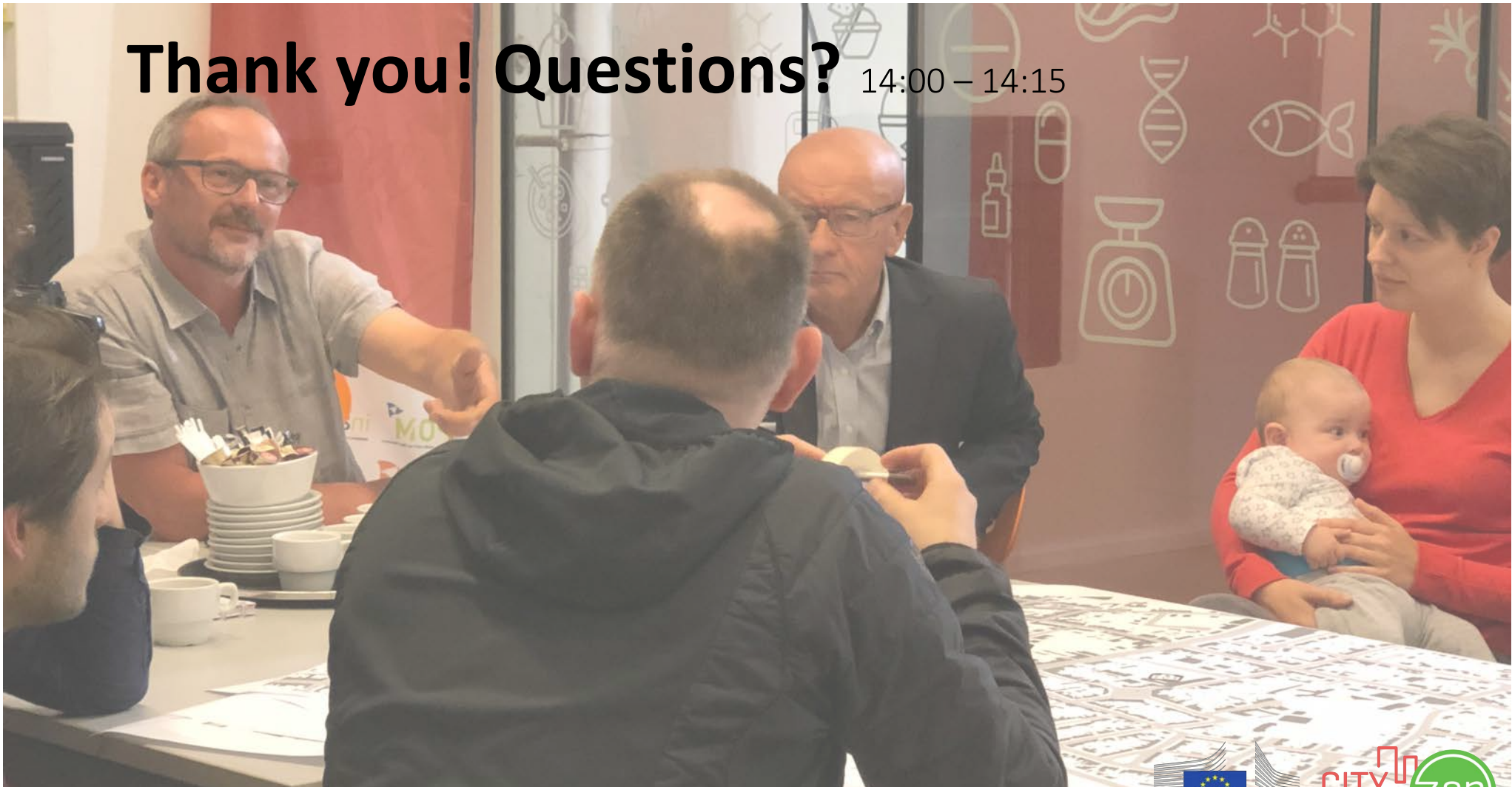


What next? 13:45 – 14:00

- **ECONOMIC SPECIALIST.** Cost?! What is cost of not realising them? In live time with Carbon, design decisions.
- **COMMUNICATION SPECIALIST.** Even greater reach and understanding.
- **VISUALISATION SPECIALIST.**
- **SOCIETAL IMPACT. VITAL!** Continue to support communities in their decision making by showing social, lifestyle and economic benefit.



Thank you! Questions? 14:00 – 14:15



Presented by Prof. Dr. Craig Lee Martin (TU Delft / UCLan)
City-zen Roadshow Leader email: C.L.Martin@tudelft.nl



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Roadshow Team: Prof.Dr. Craig L.Martin (TU Delft / UCLan) – Leader; Prof.Dr. Andy vd Dobbelsteen (TUD); Prof. Greg Keeffe (QUB); Dr. Riccardo Pulselli (UoS); Siebe Broersma (TUD); Prof.Dr. Han Vandevyvere (EnergyVille/NTNU); Dr. Andy Jenkins (QUB); Anneleen Vanderlinden (Th!nk-e); Achille Hannoset (Th!nk-e); Dylan Alling (Communication Advisor City-zen)