

THE CIRCULAR ECONOMY: A SOURCE OF INNOVATION FOR URBAN FARMERS

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SUMMARY

- Introduction : Circular economy and urban agriculture
- 1/ Techn'AU research program: How urban waste can be useful for urban farmers ?
- 2/ Interreg NWE GROOF : Synergies between buildings and greenhouses

Introduction



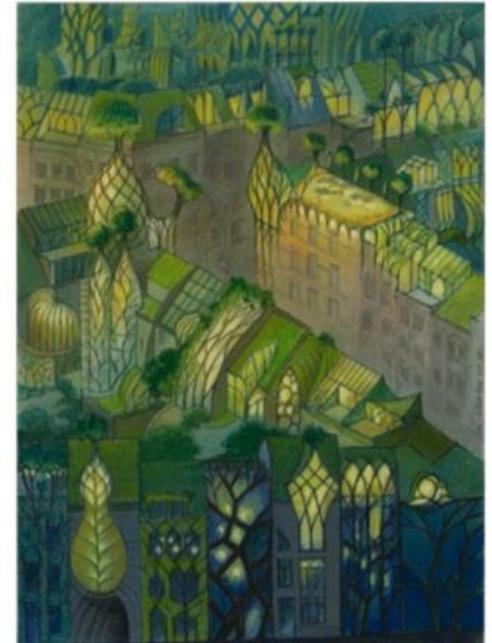
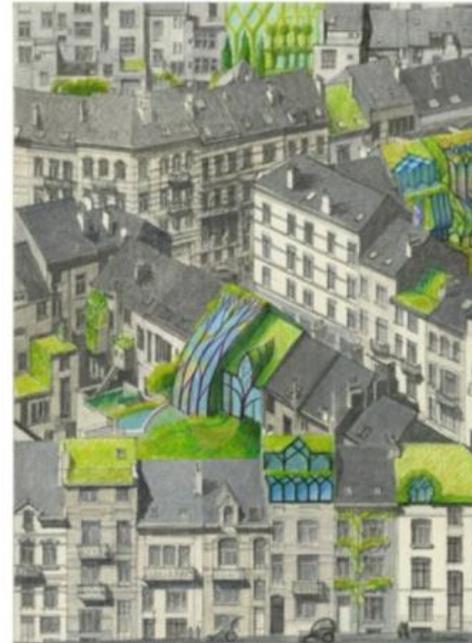
INTRODUCTION

FOR GREENER CITIES

Crédit: Luc Schuiten – Cité végétale



BEFORE

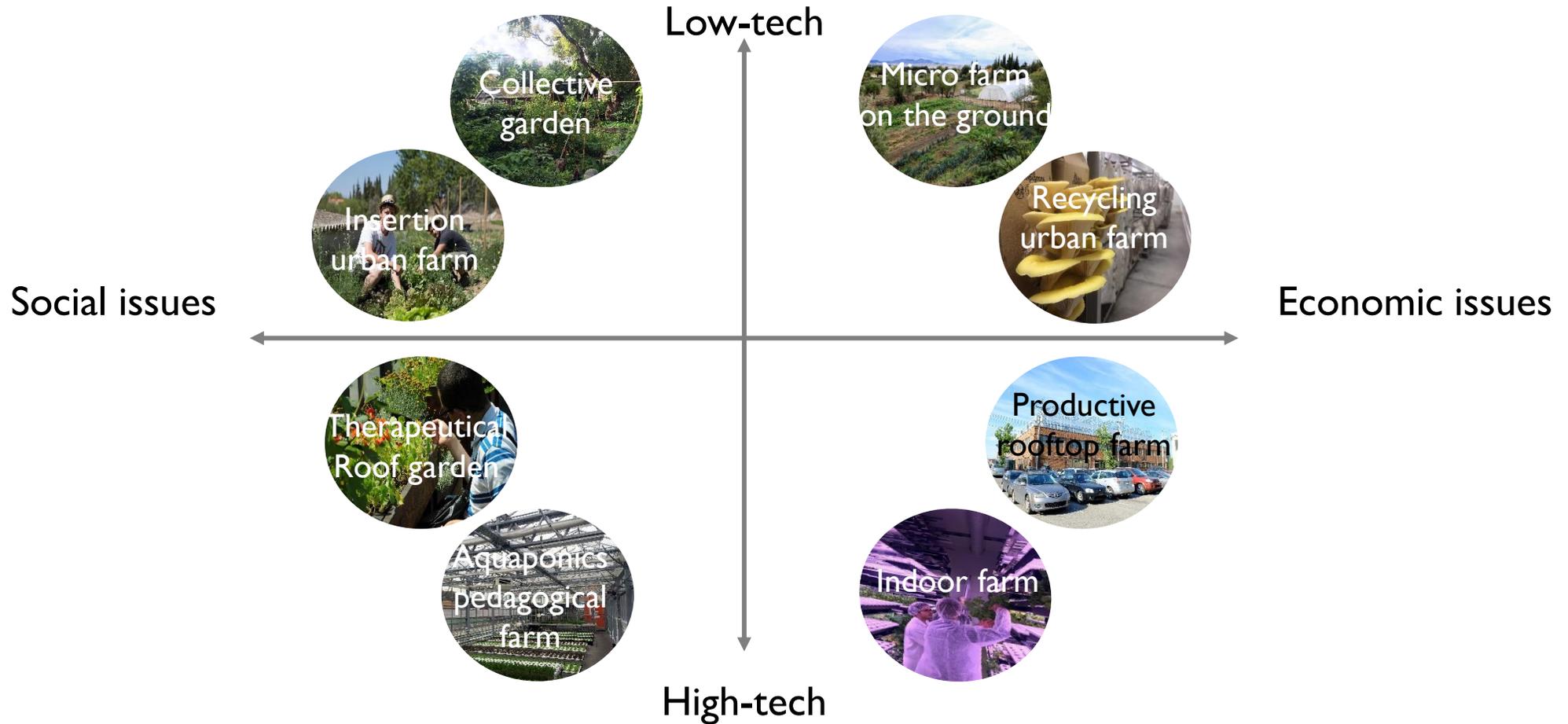


... THE FUTUR!



INTRODUCTION

URBAN AGRICULTURE : WHAT IS IT ?



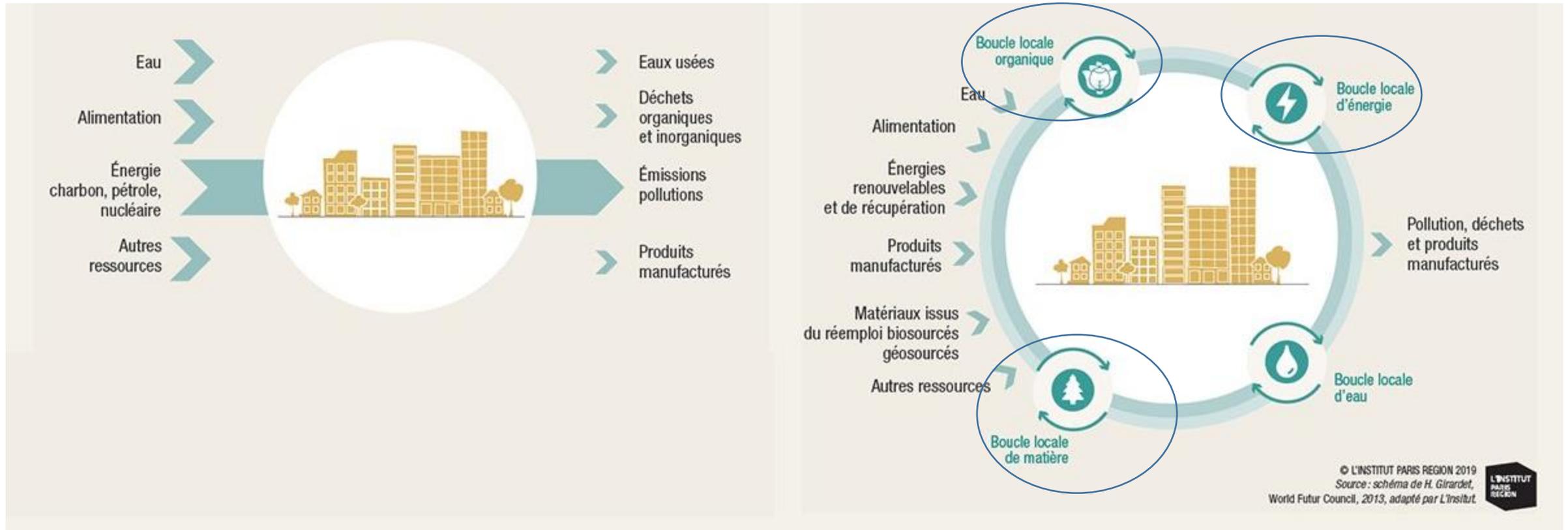


INTRODUCTION

CIRCULAR ECONOMY AND URBAN AGRICULTURE

From a linear urban metabolism...

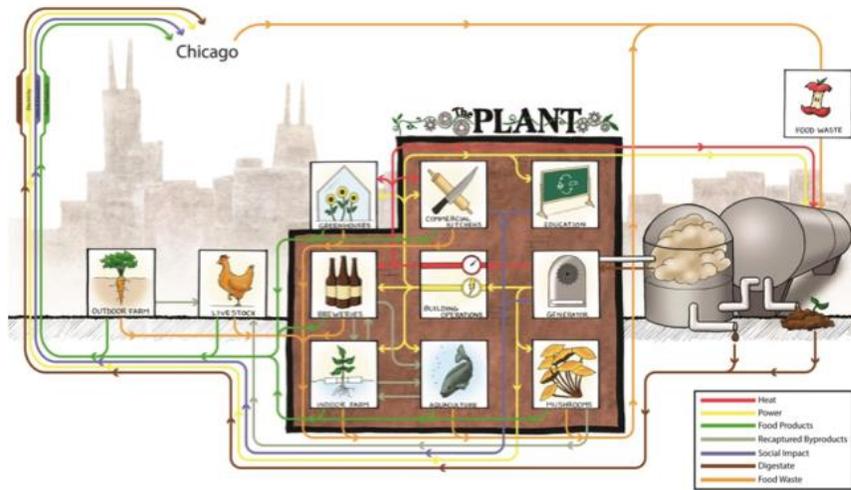
... to a circular urban metabolism



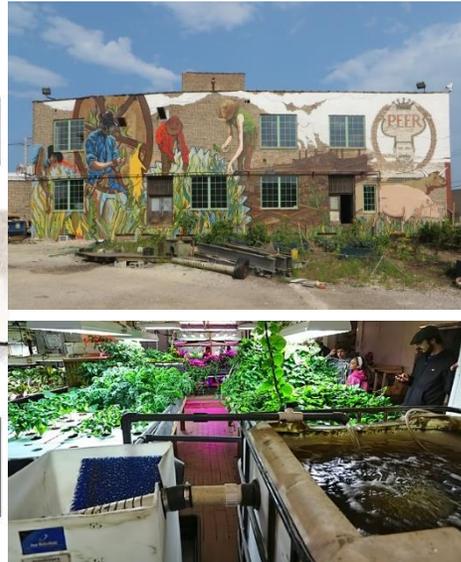
1/ Techn'AU research program: How urban waste can be useful for urban farmers ?

1/ TECHN'AU RESEARCH PROGRAM: HOW URBAN WASTE CAN BE USEFUL FOR URBAN FARMERS ?

EXISTING URBAN FARMING PROJECTS: A SOURCE OF QUESTIONS FOR RESEARCH



The Plant // Chicago



Cité maraîchère de Romainville (93)

1/ TECHN'AU RESEARCH PROGRAM: HOW URBAN WASTE CAN BE USEFUL FOR URBAN FARMERS ?

RESULTS FROM INNOVATIVE SUBSTRATES



Composts :

- GreenW+Coffee
- GreenW/eclec
- GreenW / windowrow

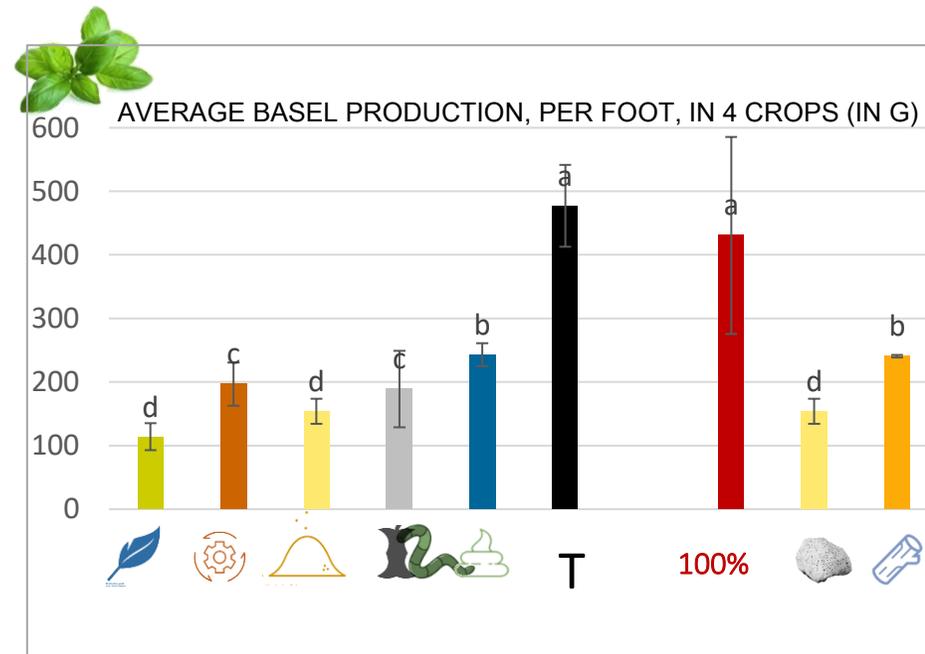
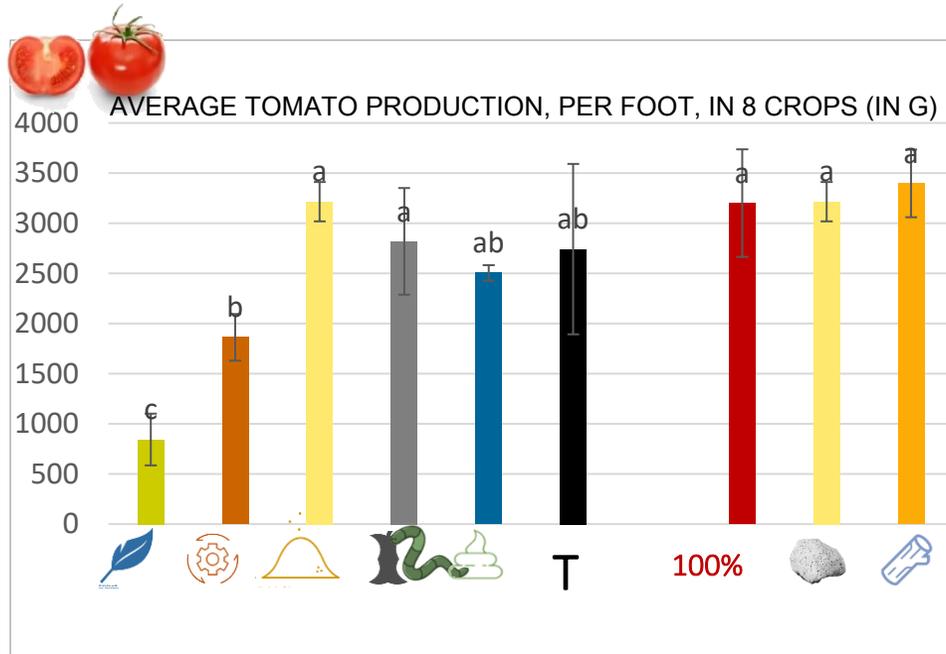
Structures :

- 100%**
100 % orga
- Concrete
- wood

Vermicomposts :

- plants
- animal

T
Control substrate

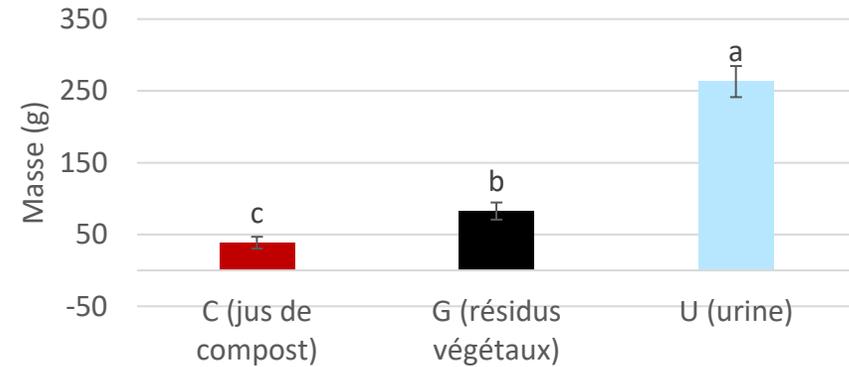


1/ TECHN'AU RESEARCH PROGRAM: HOW URBAN WASTE CAN BE USEFUL FOR URBAN FARMERS ?

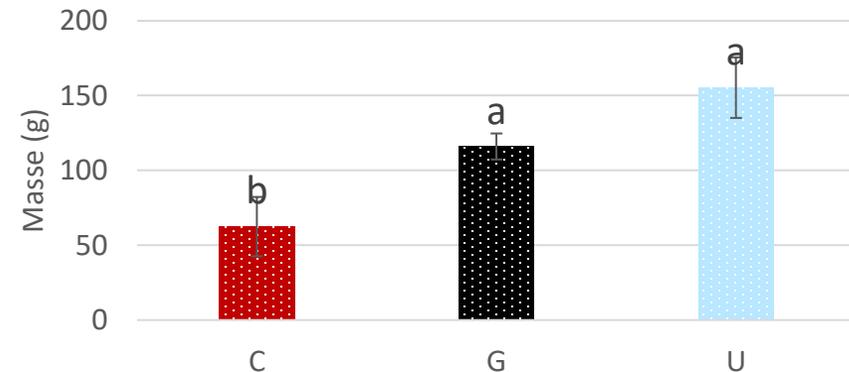
AEROPONICS TESTS WITH ORGANIC FERTILIZERS



Production per tomatoes foot (g)



Fresh mass of basil produced per plant, on 3 harvests (g)



Urban biowastes
(compost juice)



Plan residues

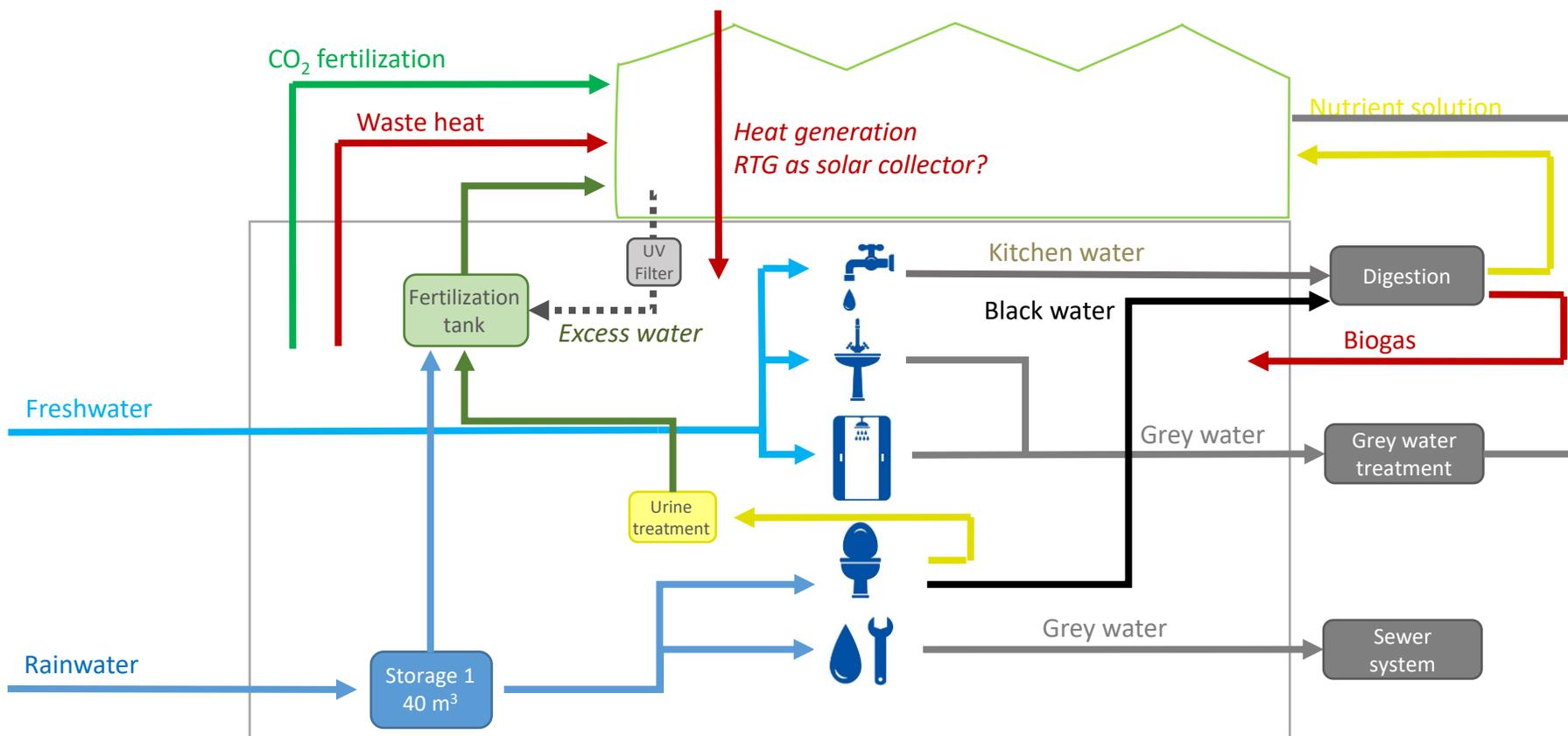


Human urine

2/ Interreg NWE GROOF : Synergies between buildings and greenhouses

2/ INTERREG NWE GROOF : SYNERGIES BETWEEN BUILDINGS AND GREENHOUSES

THE CIRCULAR SYSTEM



Freshwater	Rainwater
Excess water RTG	Yellow water
Nutrient solution and distilled water	Black water
Grey water	CO ₂ fertilization
Energy	

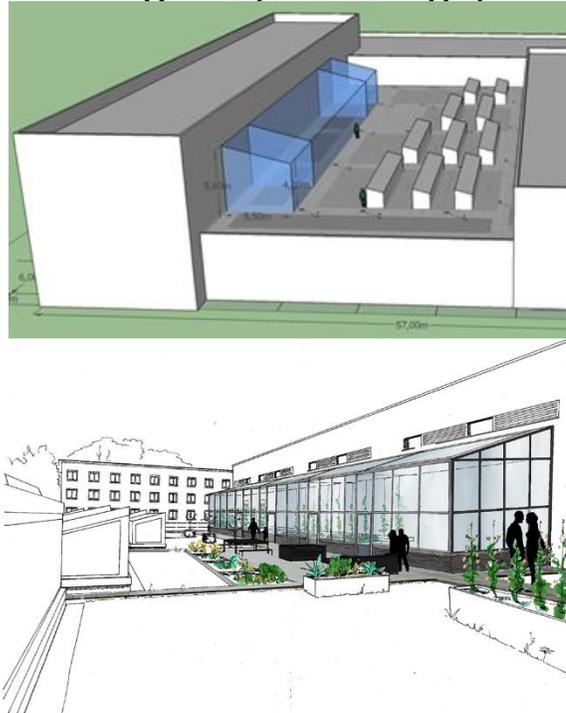
2/ INTERREG NWE GROOF : SYNERGIES BETWEEN BUILDINGS AND GREENHOUSES

PILOTS UNDER CONSTRUCTION

Germany (EBF)



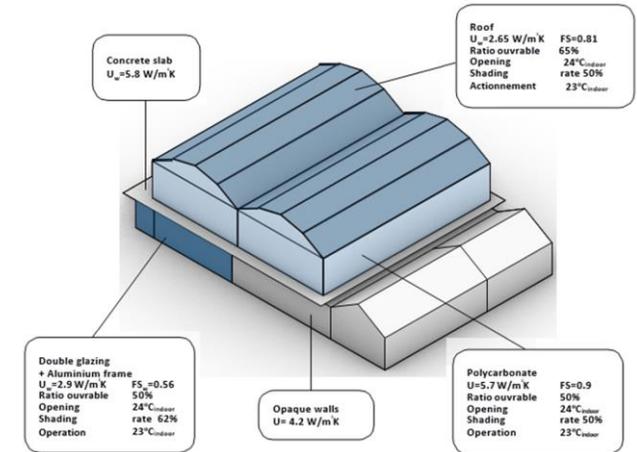
Belgium (Univ. Liège)



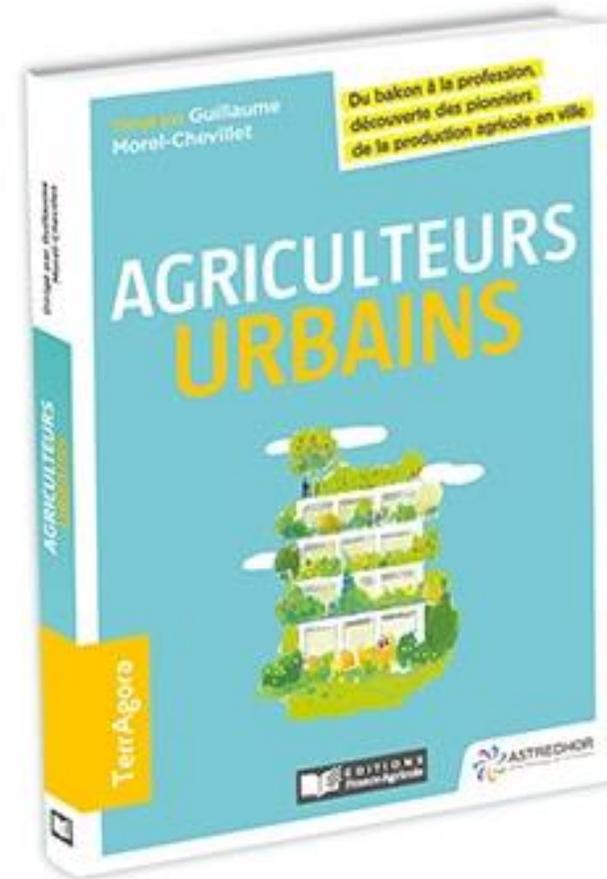
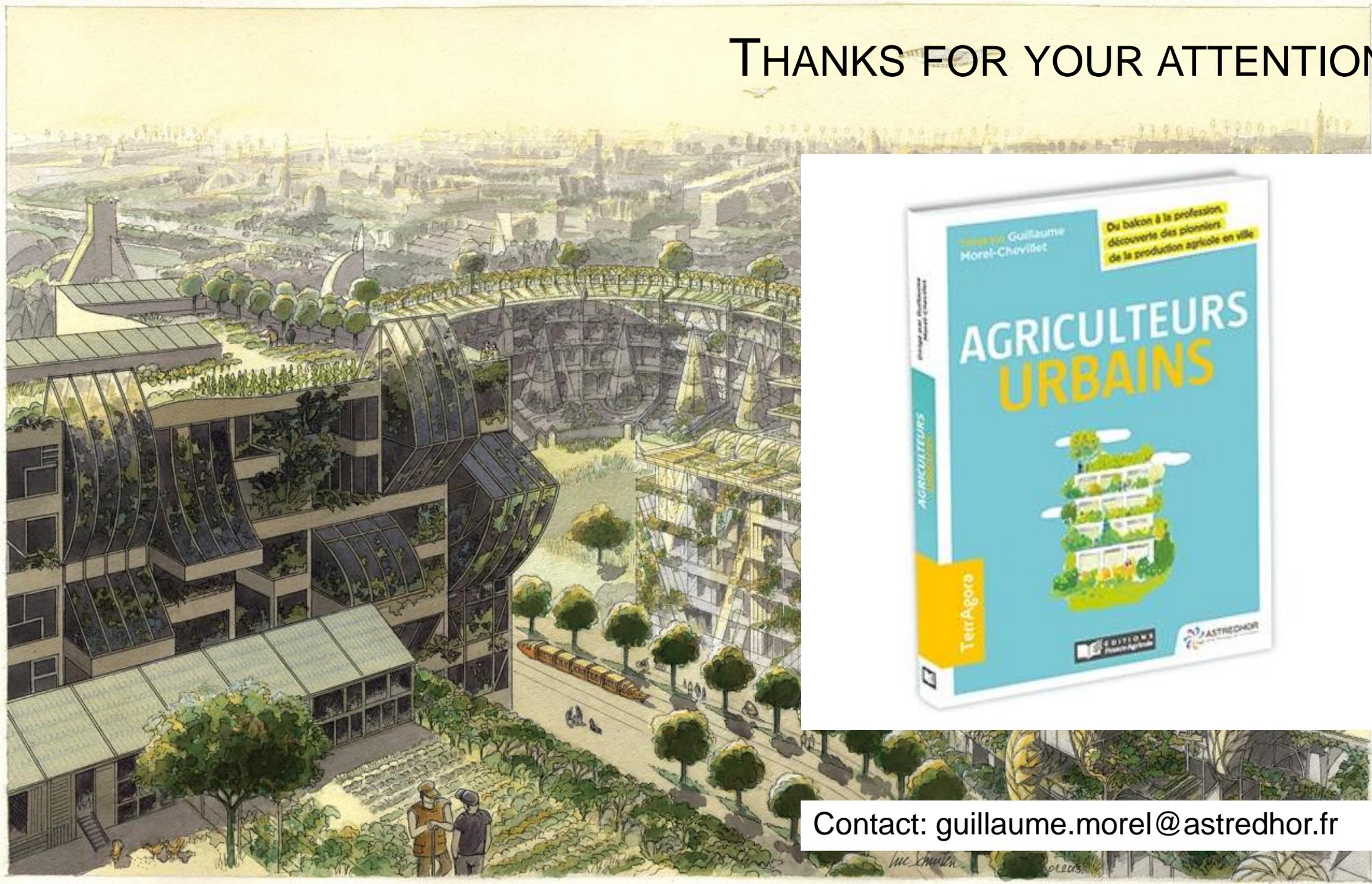
Luxembourg (IFSB)



France (Gally)



THANKS FOR YOUR ATTENTION



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