FEEDING CITIES – FIXING CITIES

THE OPPORTUNITIES OF INTEGRATED URBAN FOOD PRODUCTION

FEEDING CITIES: FIXING CITIES

Moving towards a (largely urban) global population of 9 billion+, we need to be creative in how we responsibly provide quality food for all. Reducing artificial cooling (#1), eliminating food waste (#3) and transitioning to more plant rich diets (#4) are project Drawdown top solutions.

More closely **linking the points of food production and consumption** makes sense in terms of quality and efficiency. Local production means less refrigerated transportation and storage, whilst urban food production can have many more direct and indirect benefits from **building (insulation) enhancement and repurposing, to storm water management, microclimate improvements, biodiversity support, education, community building, circular economy** ...

Urban farming is plant focused and embraces cross silo innovations more so than traditional agriculture. This poster focusses on the possibilities for integrating urban food production into our existing urban areas and looks across this diverse field from indoor climate-controlled food factories, to rooftop soil-based farms, vertical façade food systems, container-based techniques and public realm interventions.

There are many **synergies and spin-off benefits** across a wide range of Drawdown Solutions (and SDG's) whilst increasingly there are incredible urban farming systems across the world as well as cities who have adopted policies and set ambitions that place circularity and **sustainable food systems at the heart of social, environmental, economic and sustainable planning.**

BUSINESS CASE & ENVIRONMENTAL IMPACT MODEL

The case for an urban farm is multi-sided. There are generally many different activities that contribute to income and to achieving other objectives, reducing other costs and so on. When we take a holistic and integrated approach then it becomes a challenge to model the environmental benefits and many local factors come into play. When we place food production back into cities, then we automatically start to think, plan and work in a cross-silo way. For every opportunity there will be unique challenges and opportunities, spin-offs and benefits.

INCOME
- Food Sales (direct public, direct retail and / or F&B outlets)
- Events (corporate hospitality, conference space, meeting rooms, weddings etc)
- On-site restaurant / café
- Sale of energy, biogas, compost, fertilizer
- Sale of water for drinking
- Knowledge, training and education

COST BALANCES
- Energy generation
- Irrigation water collection and use
- Storm water management
- Compost and fertilizer production
- Biogas for heating / cooking
- Public spaces and green spaces can gain income generation / cost offsetting possibilities

EFFICIENCIES & ENVIRONMENTAL FOODPRINT
- Where is the fresh food (that you plan to produce in the city) currently coming from?
- How far is it travelling and how?
- How is it produced? How much land, water, energy?
- Quantity lost in the 'farm-to-fork' process?
- Is supply and demand currently well matched?

SPIN-OFFS
- Local employment & local economy
- Skills development
- Economic impulse / urban regeneration tool
- Social engagement / community development
- Biodiversity
- Urban heat island mitigation
- Building repurposing / enhancement
- Stimulating innovation
- Tackling empty and underutilized building spaces
- Relieve pressure on peri-urban & rural areas
- Allowing people to be part of the solution!

DRAWDOWN

#1. REFRIDGERATION (89.74 GT)
#3 FOOD WASTE (70.53 GT)
#4 PLANT RICH DIET (66.11 GT)
#10 ROOF TOP SOLAR (24.60 GT)
 # 26 ELECTRIC VEHICLES (10.80 GT)
 # 27 DISTRICT HEATING (9.38 GT)
 # 31 INSULATION (8.27 GT)
 # 33 LED LIGHTING (7.81 GT)
 # 41 SOLAR WATER (6.08 GT)
 # 42 HEAT PUMPS (5.20 GT)
 # 45 BUILDING AUTOMATION (4.62 GT)
 # 46 WATER SAVING (4.61 GT)
 # 50 COGENERATION (3.97 GT)
 # 60 COMPOSTING (2.28 GT)
 # 61 SMART GLASS (2.19 GT)
 # 64 METHANE DIGESTERS (1.90 GT)
 # 65 NUTRIENT MANAGMENT (1.81 GT)
 # 69 ELECTRIC BIKES (0.96 GT)
 # 71 WATER DISTRIBUTION (0.87 GT)
 # 73 GREEN ROOFS (0.77 GT)
 # 76 MICRO-WIND
 # 77 GRID FLEXIBILITY
 # 77 ENERGY STORAGE
 # 78 MICRO-GRIDS
 # 79 NET-ZERO BUILDINGS

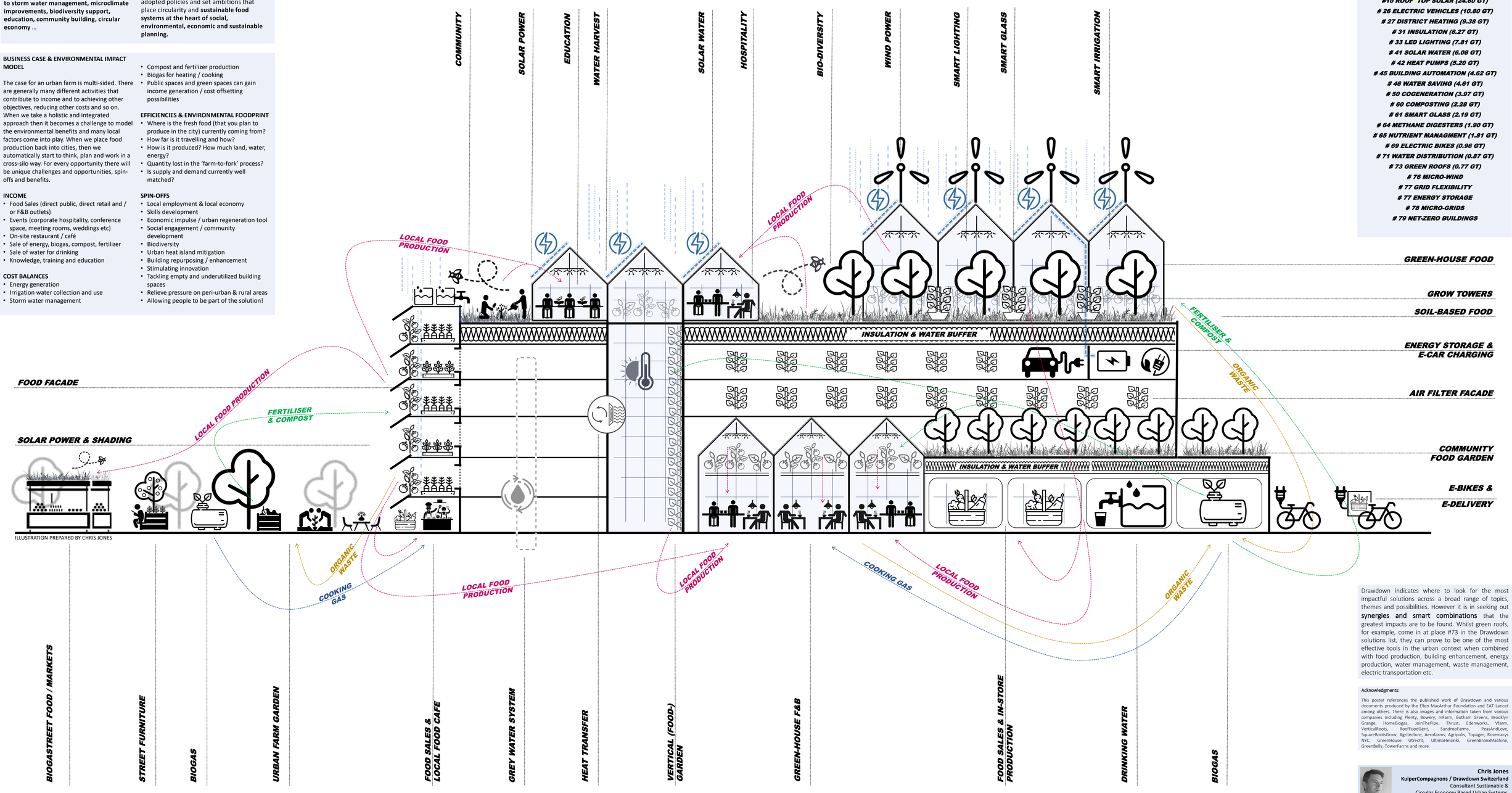

ILLUSTRATION PREPARED BY CHRIS JONES

Drawdown indicates where to look for the most impactful solutions across a broad range of topics, themes and possibilities. However it is in seeking out synergies and smart combinations that the greatest impacts are to be found. Whilst green roofs, for example, come in at place #73 in the Drawdown solutions list, they can prove to be one of the most effective tools in the urban context when combined with food production, building enhancement, energy production, water management, waste management, electric transportation etc.

Acknowledgments:

This poster references the published work of Drawdown and various documents produced by the Ellen MacArthur Foundation and EAT Lancet among others. There is also images and information taken from various companies including Plenty, Bowery, InFarm, Gotham Greens, Brooklyn Grange, HomeBiogas, JoinThePipe, Thrust, Edenworks, Vfarm, VerticalRoots, RoofFoodGent, SundropFarms, PeasAndLove, SquareRootsGrow, Agritecture, Aerofarms, Agripolis, Topager, Rosemarys NYC, GreenHouse Utrecht, UltimaHelsinki, GreenBronxMachine, GreenBelly, TowerFarms and more.

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