Storage of grain
Capacity: 7000 Tons

Environmental Facilities
Biogas Unit, Slurry Separation, Composting unit

Energy Centre
3000 MWh electricity, 4500 MWh heat

Slaughterhouse
125 Finishers / Day

Visitors Centre
30 visitors / Day

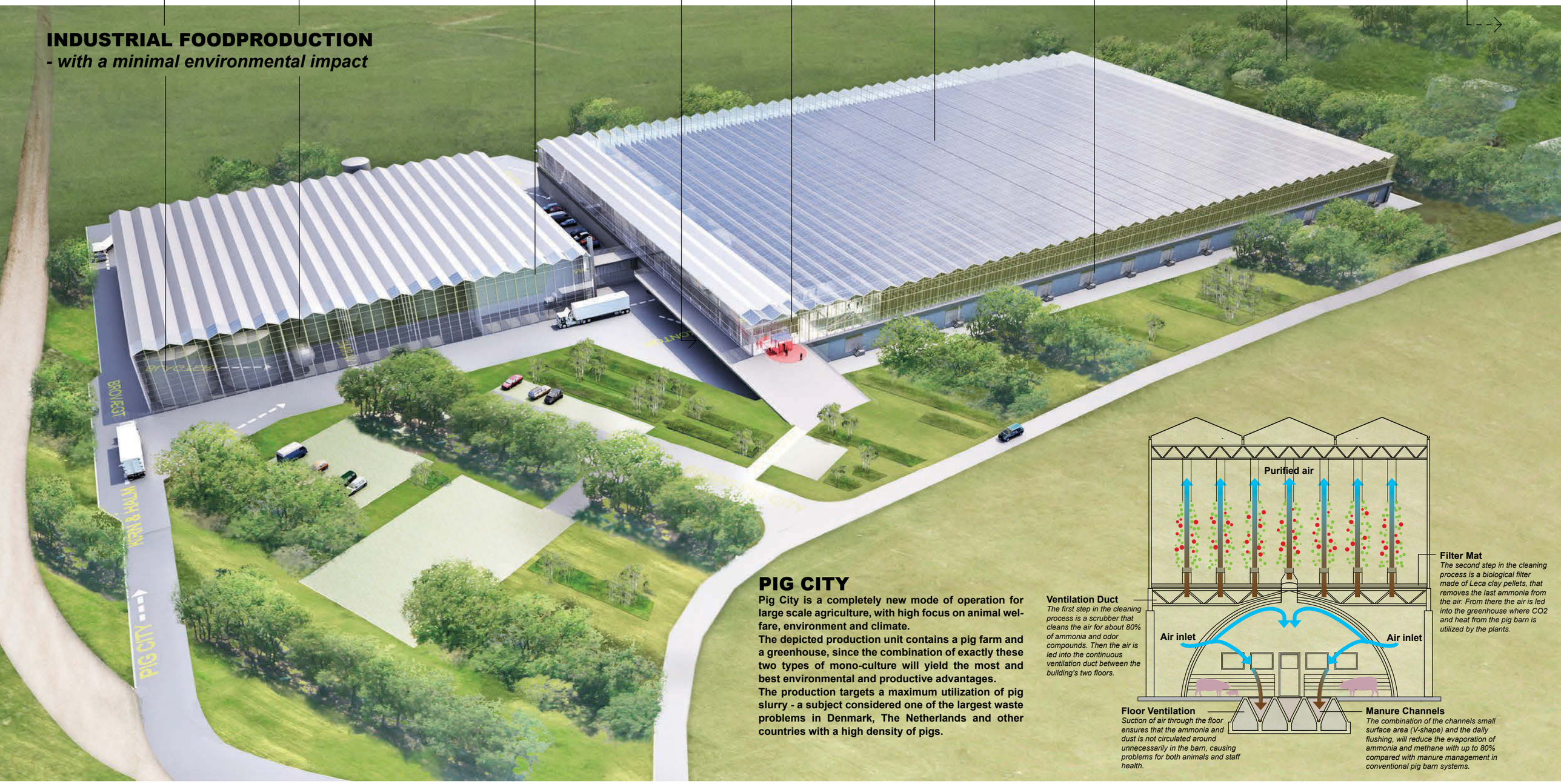
Greenhouse
1200 tons of Tomatoes / Year

Pig Housing Units
20.000 finishers / Year

Biological Water Purification
Capacity: 950 m3 / Year

Windmills
Annual production 47 MWh / Year

INDUSTRIAL FOODPRODUCTION
- with a minimal environmental impact



PIG CITY

Pig City is a completely new mode of operation for large scale agriculture, with high focus on animal welfare, environment and climate.
The depicted production unit contains a pig farm and a greenhouse, since the combination of exactly these two types of mono-culture will yield the most and best environmental and productive advantages.
The production targets a maximum utilization of pig slurry - a subject considered one of the largest waste problems in Denmark, The Netherlands and other countries with a high density of pigs.

Energy Balance, Thermal ***MWh / Year***

	Production	Consumption
Greenhouse		8.200
Pig Housing Units, Ventilation	13.000	
Pig Housing Units, Manure	1.700	
Slaugtherhouse	90	200
Others		200
Total	**14.790**	**8.600**
Balance		**+ 6.190**

Water balance ***m3 / Year***

	Production	Consumption
Rainwater from roofs	15.680	
Greenhouse	200*	16.400
Pig Housing Units	16.200*	18.800
Slaugtherhouse	3.300*	4.360
Others		200
Total	**35.380**	**48.160**
Balance		**-12.780 m3**

*** recycled water**

Global Warming Potential ***CO_2e per kg produce***

	Pork	Tomatoes
Pig City	-0.163	0.0126
Conventional production	3.64	3.44
Organic production	4.26	4.95

AgroTech 2011

ADVISORS:
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GOTTLIEB PALUDAN ARCHITECTS **WWW.GOTTLIEBPALUDAN.COM**

SYMBIOSIS

ENVIRONMENTAL-FRIENDLY PRODUCTION

Pig City combines a pork production with a tomato greenhouse to utilize excess heat, electricity, CO2 and nutrients from the pigs.
Actually, so much energy is wasted from the pork production that the tomatoes will be produced entirely without external energy sources.
There will be no stench from the pig production and no environmental disharge of ammonia and other fertilizers via exhaust fumes.

ANIMAL WELFARE

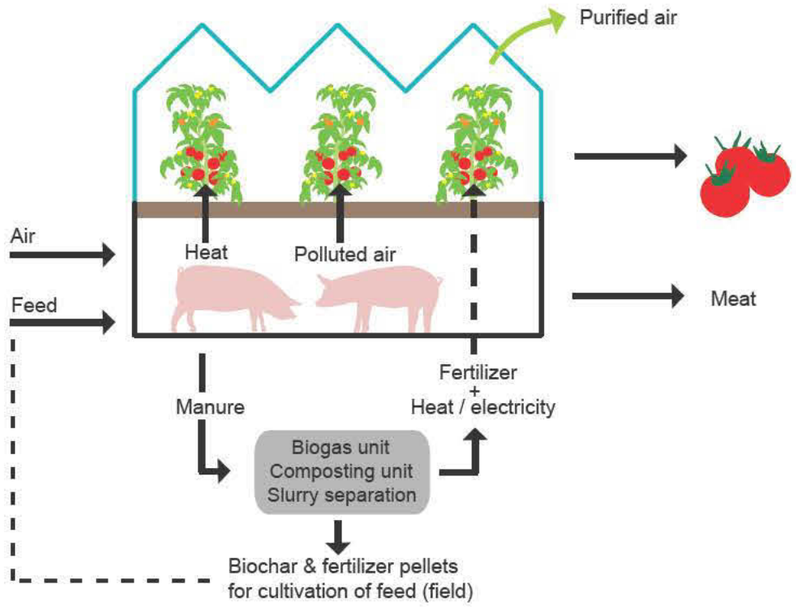
The piglets are weaned at 9 weeks, compared to the normal 3-4 weeks. All organic regulations are respected indoors, including a low medicine consumption.
No animals are tethered, and tail docking and castration are not allowed.
The pigs are provided with plenty of straw, rooting materials and roughage, which stimulates the animals' natural behavior and provides a good pig life. By incorporating a local slaughter house the farm is true to the farmers principle of minimizing animal stress: Pigs are born into the same unit from when exceeding a weight of 125 kg, are taken directly to the slaughterhouse.
A new ventilation system located at floor level will minimize dust and ammonia exposure to both farm workers and animals.

ENVIRONMENTAL TECHNOLOGIES

The surplus energy and heat generated from the biogas system can be directly used locally - and not wasted as is the case with many currently established decentrally located biogas units.
The project will also include air purification technology as well as the full integration of environmental technologies allowing for the total separation of pigfarming from the open land.

ARCHITECTURE

Despite a total of more than 50.000 m2 it has been possible to create a building that not only integrates into the landscape but also invites the public inside - for a view of the pigs, the tomatoes and the visitors centre.



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THE PROJECT IS UNDER DEVELOPMENT AND WILL BE REALIZED WITH FINANCIAL SUPPORT FROM REALDANIA