TEAM
SCUTxPOLITO
SDC2018

# INTRODUCTION OF SD

The Solar Decathlon is a solar building scientific competition sponsored by the U.S. Department of energy and participated by the global top universities.

Since the first Solar Decathlon held in Washington DC, it has developed to Europe, the Middle East and other places. Solar Decathlon is called the Olympic Games of the green building and would be held every two years.

The whole Competition is evaluated in the actual construction and is divided in ten contests, so it is named as The Solar Decathlon. Since 2002, the competition was held successfully in the United States, Europe, China and other places, attracting more than 100 universities around the world to participate, showing the world's latest energy technology and energy conservation technology. It has been supported by the governments, enterprises and public around the world.

SOLAR DECATHLON CHINA
中国国际太阳能十项全能竞赛

# SD AUDIENCE

## IN TOTAL THE SD HAS RECEIVED:

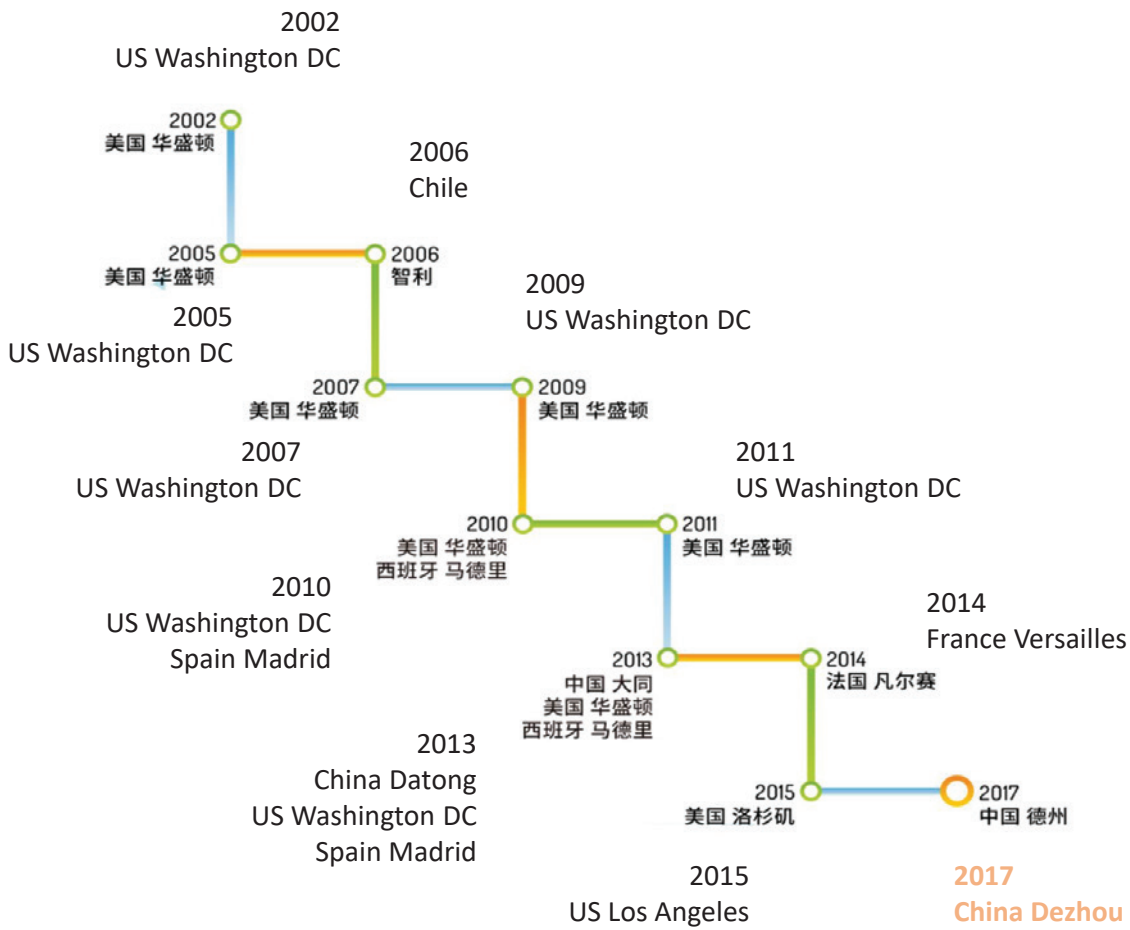
_ more than 6000 corporates sponsorship

_ more than 100 government departments

_ professional organizations support

_ 3.000.000 people has attended the competition as audience

_ media communication has reached 300.000.000 audience

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# INTRODUCTION OF SD

Solar Decathlon China is sponsored by the Chinese Department of energy and U.S. Department of energy, jointly organized by Chinese Department of finance and Department of housing and urban rural development, supported by CYL Central School Department and undertaken by the Peking University.

Teams in the competition will design, build and run a highly efficient, energy-efficient, attractive solar house. Organizers hope to promote the development of green building, enhance people's awareness of environmental protection and promote innovation and development of related technologies and commercialization through the competition.

NOTE: In January of 2011 Peking University and U.S. Department of energy signed the Solar Decathlon competition cooperation agreement in Washington, introducing this world's highest level of solar energy application competition into China for the first time. In January 19, 2011, President Obama and President Hu Jintao met at the White House, talking about the first China-US energy cooperation project. A cooperation signed by President Hu Jintao during his state visit to the United States in 2011 that China would host the future Solar Decathlon competition.

signed the Solar Decathlon competition cooperation agreement in Washington

SDC2013 Team SCUT and their house

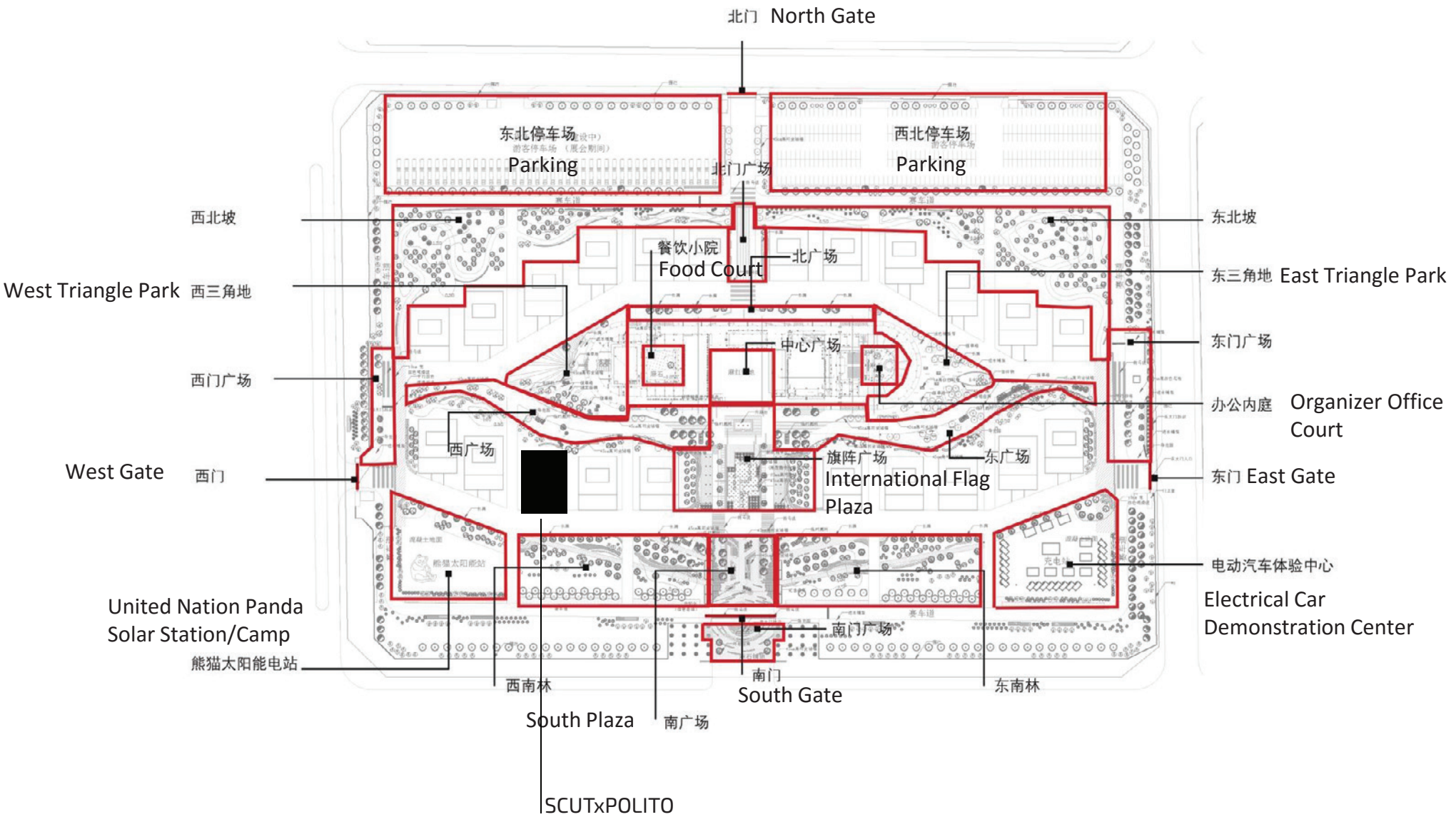
# WHERE IT WILL BE

The team of the Politecnico di Torino took part in the competition together with the university SCUT (South China University of Technology) in Guangzhou.

The Solar Decathlon China 2018 will take place in the city of Dezhou, famous for being a "green city" of China located in the province of Shandog.

# MASTERPLAN DEZHOU
## SOLAR DECATHLON COMPETITION

# MASTERPLAN DEZHOU _ SOLAR DECATHLON COMPETITION

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# INSTRUCTOR OF TEAM SCUT-POLITO

Instructors come from Polytechnic University of Turin, South China University of Technology`s school of architecture, civil and transportation and State Key Laboratory of Subtropical Building Science.

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State Key Laboratory of Subtropical Building Science
South China University of Technology

华南理工大学建筑设计研究院
ARCHITECTURAL DESIGN RESEARCH INSTITUTE OF SCUT

# TEAM SCUT-POLITO

## SCUT _ CORE MEMBER


## POLITO _ CORE MEMBER


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# SDC2013 SCUT TEAM`S PERFORMANCE REVIEW

South China University of Technology team has spent over two years to build solar ecological residential house E-CONCAVE, and presented perfectly on the stage of Solar Decathlon China competition in 2013, won five first-place prizes including architectural design, marketing, comfort, home entertainment and others, one second-place prize and two third-place prizes. The final score won the silver medal winner.This is also the best performance of Chinese teams in the Solar Decathlon competition.

Photo of E-CONCAVE


Team SCUT won the second place in SDC2013

# SDC2013 SCUT PREVIOUS COOPERATION

Organizer
主办方

中国 SD CHINA
国际太阳能十项全能竞赛

Top Sponsor
顶级赞助商

中国建筑第四工程局有限公司
CHINA CONSTRUCTION FOURTH ENGINEERING DIVISION CORP. LTD


Sponsors
赞助商

YOYU永裕
创造 由你而想

Schneider Electric

VELUX

三雄·极光照明

SILKROAD

GoldenStar
Garden Equipment

DUPONT

KELI

闽赛特
SUPER TECH

Bucalus 贝克洛

DAIKIN

Supporters
支持单位

亚热带建筑科学国家重点实验室
State Key Laboratory of Subtropical Building Science
South China University of Technology

华南理工大学建筑设计研究院
ARCHITECTURAL DESIGN RESEARCH INSTITUTE OF SCUT

## Highlight of Competition

### Market–oriented

- Double–layer building meeting the demand of Chinese market
- Energy balance assessment of new electric vehicle and charging pile
- Assessment of new energy storage

### Greater influence

- 3–month exhibition period for public
- 10,000 + mw2 independent display area
- 9 theme weeks (low carbon industry, life...)
- 360 media campaigns
- Series Summits on SDC Low Carbon Development

### Intelligent Low–carbon Park Entity

- Works entering the competition will be permanently retained in the arena
- Link the residential buildings, public buildings, electric piles, energy system together, and build China's first intelligent low–carbon park demonstration entity

### Education and talent

- 1,000+ talents with investigation and research experience in actual projects
- Expert databases and intellectual support from nearly 50 international famous universities
- 22 Chinese and foreign joint teams, localization of international vision

### Innovation and entrepreneurship

- Encourage universities make innovation under the guidance of the market demand
- Post SD operation

### SDC later operation

- Establish "SD Chinese Low–carbon Development Alliance" which consists of strategic partners, government, colleges and universities, financial institutions and so on
- Take SD as a starting point; actually participate in China's new–type urbanization, beautiful villages and other entities

# PROJECT

## LONG PLAN

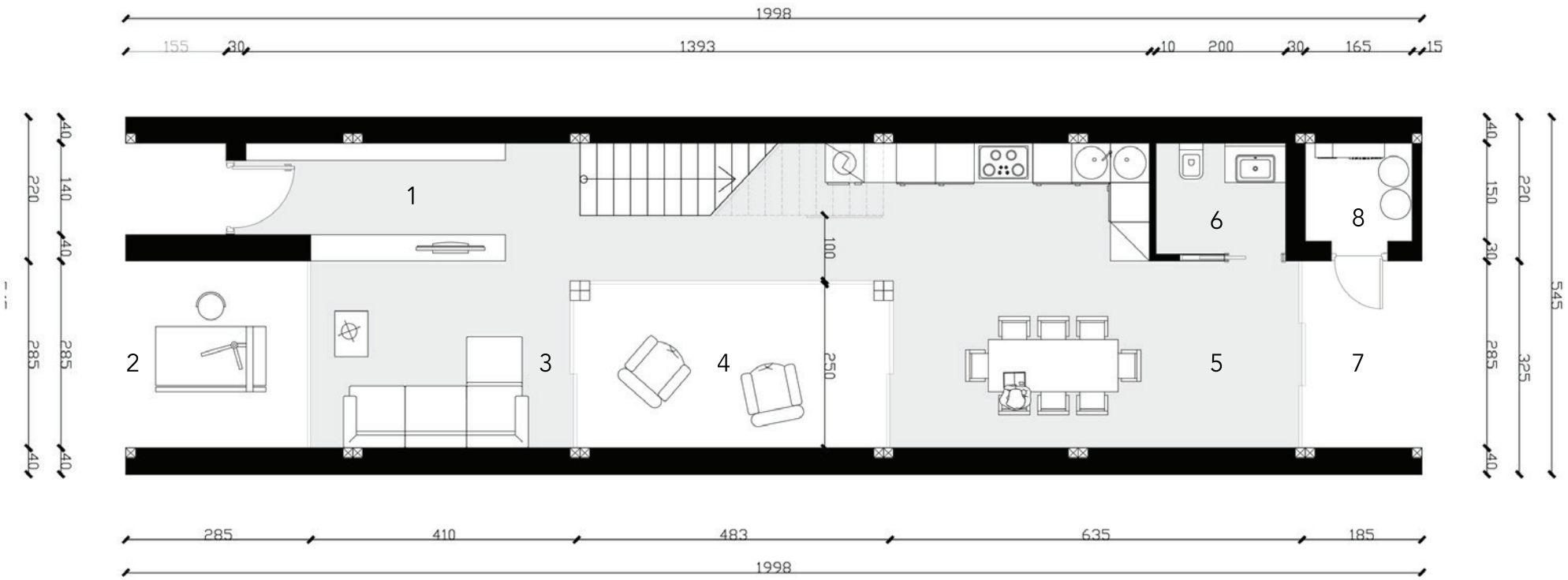
SCUT X POLITO

The collaboration between the South China University of Technology and Politecnico di Torino team takes the opportunity to participate in the SDC 2018 to respond to the energy sources and social issues caused by global urbanization around the world, propose innovative design of modern dwelling based on zero-energy consumption. A design ispired from the traditional Lingnan dwelling – bamboo tube house and, using innovative technologies, designed a new type of urban residence: sustainable, self-efficient, flexible and that corresponds to the young generation needs.

First, taking into account as the population dynamics increases and the energy consumption in residential buildings which puts enormous pressure on global ecology. Second, the development of urban housing today presents a series of pathological problems; the younger generation is under heavy housing employment pressure. In addition, due to the traditional residential construction without preservation, the traditional context in modern development slowly falls apart. Basing on the detailed history and research of urban development, as well as the marketing plan, Team SCUT-POLITO took its way through the government and developers, city planning and detaile whole-scale design. Proposing a new type of long and narrow selfefficient residences that can solve problems of city energy shortage, urban diseases and respond to the requirements of young generation's housing, at the same time satisfying the context of traditional architecture and city cultural environment.

# COMMUNITY INTEGRETION

# GROUND FLOOR PLAN




1. Corridor
2. Workingspace
3. Livingroom
4. Patio
5. Kitchen
6. Bathroom
7. Courtyard
8. Mechanical room

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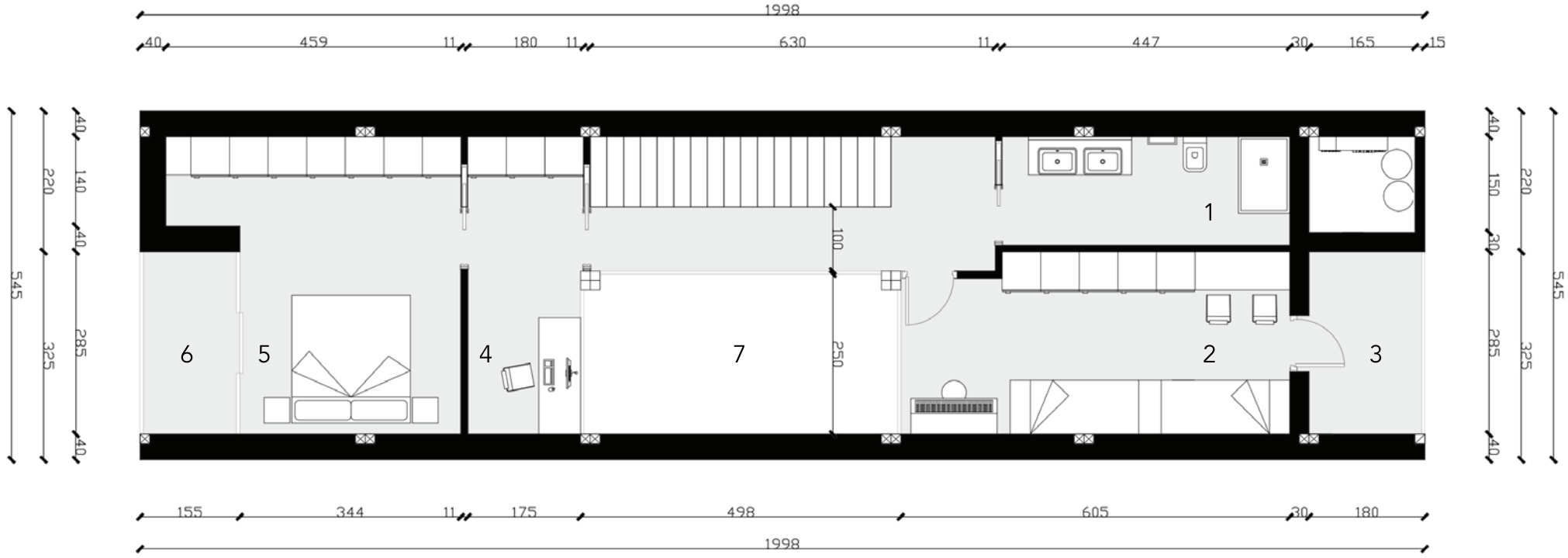
# FIRST FLOOR PLAN




1. Bathroom
2. Children Room
3. Terrace
4. Studio
5. Main Bed Room
6. Terrace
7. Patio

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# LIVING ROOM

# KITCHEN

# PATIO

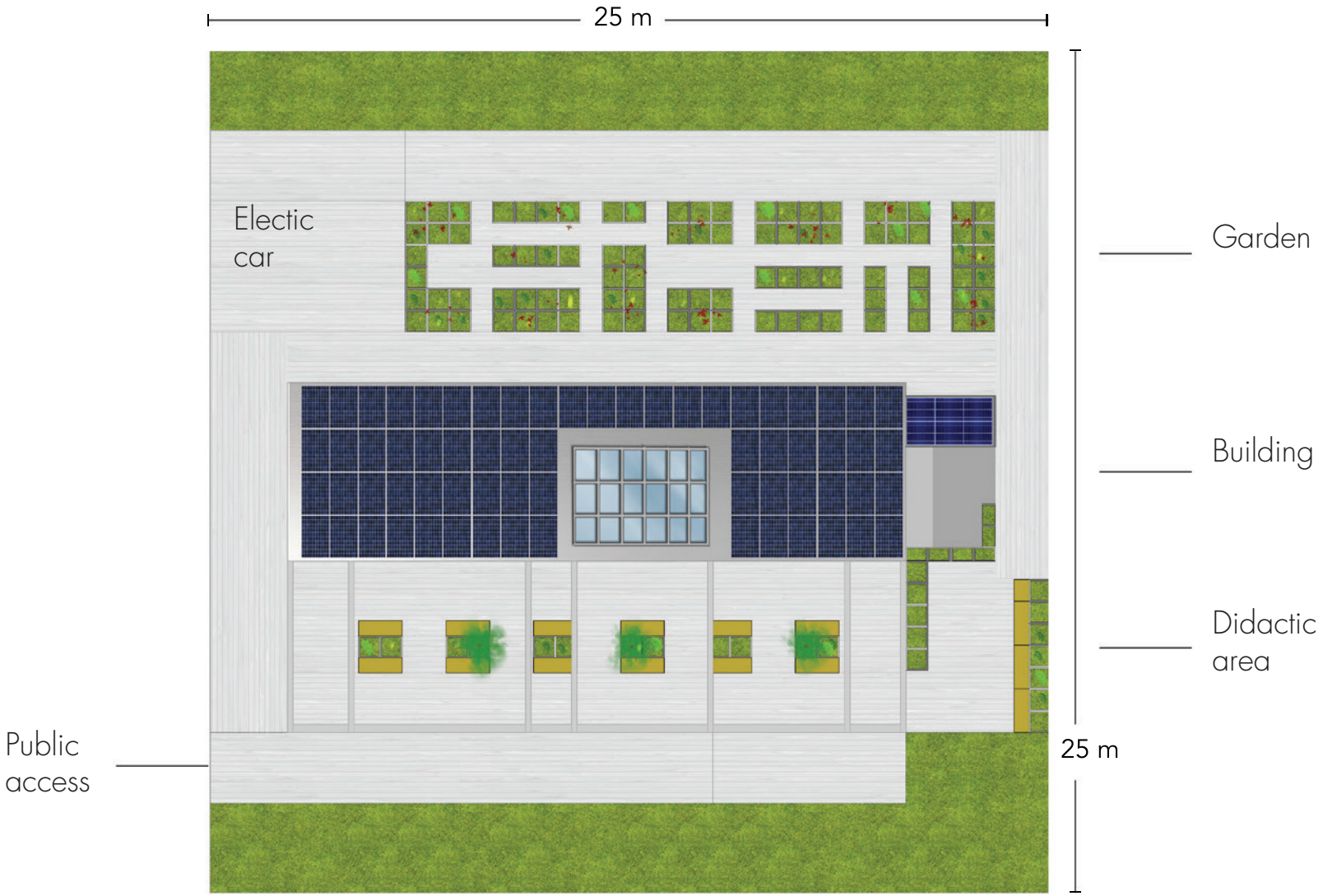

Pumpkin Pie
MIX TOGETHER:
1½ TEASPOONS PUMPKIN PIE SPICE
¾ CUP Sugar
½ TSP SALT
2 EGGS (BEATEN)
ONE CAN (15 OZ.) Pumpkin
1¼ CUPS MILK evaporated
POUR INTO PREPARED PIE CRUST...
Bake
Cherry PIE
BOWL

# OFFICE

# MAIN BEDROOM


# CHILDREN ROOM

# LANDSCAPE




# MASTERPALN

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SOUTH CHINA UNIVERSITY OF TECHNOLOGY
1934


POLITECNICO DI TORINO
1859
1906