


# Travelling exhibition

# URBANBEES

## Project and technical details



Programme Life+ Biodiversite  
LIFE+08 NAT-F-000478



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# Project objectives

The decline of European bee populations (Apiformes ; 2500 species in Europe) was recently confirmed in abundance as well as diversity<sup>1</sup>. Yet the pollination service provided by these insects is essential for nearly 80% of the wild flora and 70% of the crops grown in Europe, with an economic impact estimated at €14.2 billion for the 25-member European Union alone in 2005<sup>2</sup>.

Recent work has shown that urban habitats can harbour some wild bee species<sup>3</sup> and they might therefore play a role as temporary or permanent refuge for some animal and plant species.

In the framework of the LIFE+ Biodiversity program, the 5-year project **URBANBEES** aims to conserve and enhance the biodiversity of wild bees in urban habitats in Europe.

Since a few years, French cities (Lyon, Villeurbanne and several suburban cities), changed their green spaces action plan and their relationship with residual spaces of nature. Cities council already being doing efforts to protect wild species and biodiversity in general. **URBANBEES** program, URBAN BEE biodiversity action planS, could give new opportunities as for possibility to preserve useful biodiversity in urban and periurban areas.

## Exhibition objectives

This travelling exhibition, realised in european program **URBANBEES**, aims to illustrate and help to disseminate an action plan. The exhibition will explain simple actions for citizens as well as for the staff of parks and green areas in urban and periurban areas. From January 2014, the exhibition will be lent to 12 european cities.

We want a large audience to discover wild bees. So this exhibition has been built as an educational and playful tool intended to make people sensitive to wild bee diversity, their role in pollination and food diversity.

<sup>1</sup> Biesmiejer et al. 2006 Science 313:351-354

<sup>2</sup> Gallai et al. 2009 Ecol. Econ. 68:810-829

<sup>3</sup> Matteson et al. 2008 Ann. Entomol. Soc. Am. 101:140-150





# Audience

All ages admitted.

3 reading levels (introductory and main texts, further texts-to learn more, texts written for 7-12 years old reading age).

Trilingual exhibition: French, English, German.

## Loan conditions

The exhibition will be lent for free for a period of 3 or to 4 weeks.

Transportation and insurance costs are the responsibility of the borrower (exhibitor amount to provide 86 000€ HT\*).

\* Estimated insurance cost of exhibition is about 250€ excluding insurance during transport (which is calculated by carrier). **Amount given by a french insurer.**

## Technical details

Interior exhibition (if possible watched).

Area required 75 to 100m<sup>2</sup>.

Provide electrical connections per component.

About 18 transportation cases on wheels.

Transportation case weight from 45 kg to 90 kg (total weight < 1250 kg).

Approximate volume < 20 m<sup>3</sup>. **Caution a 20 m<sup>3</sup> space is required to storage boxes.**

Materials used: interlocking FSC multiplex panel

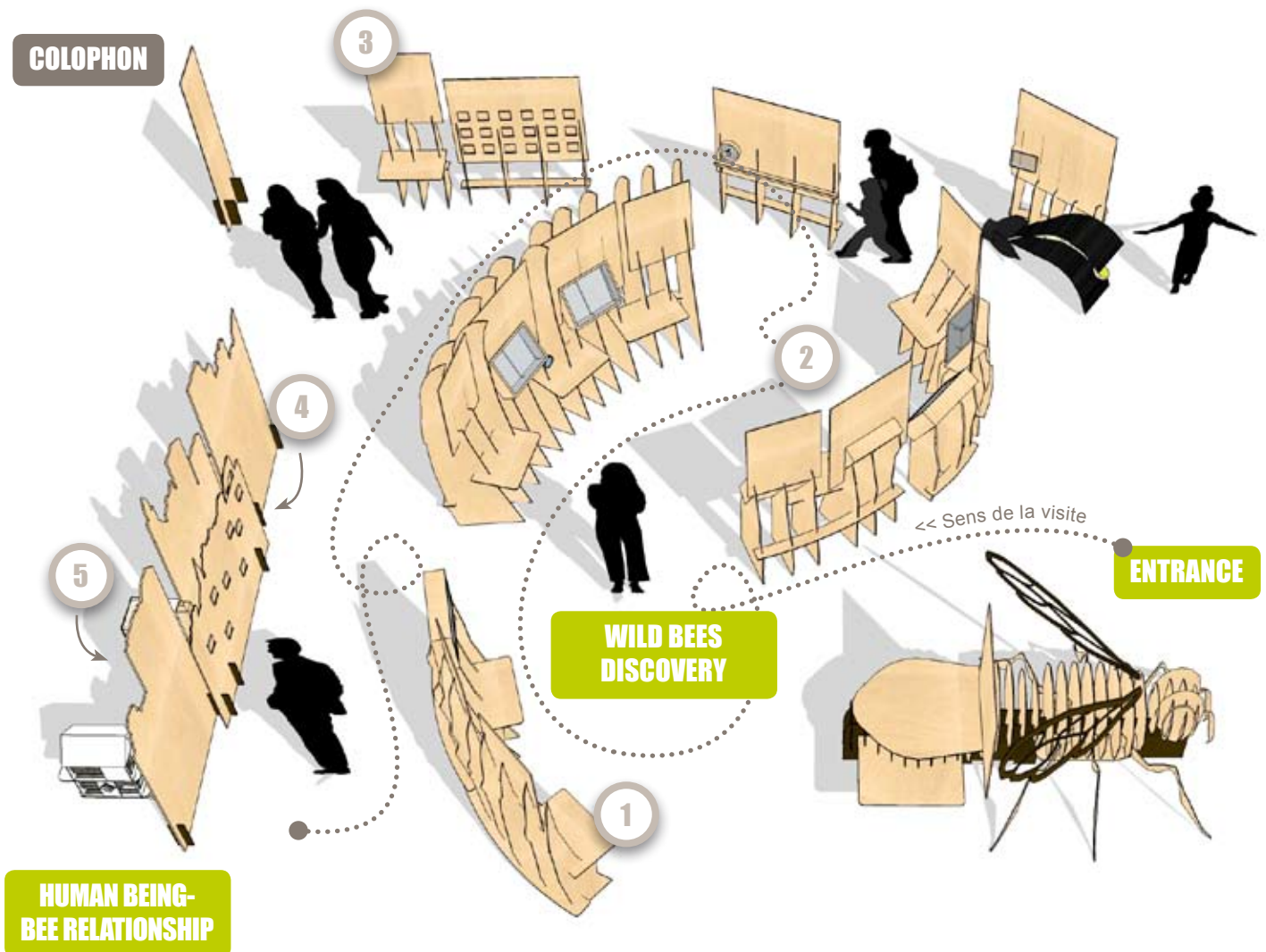
(< like 3D wooden puzzle)



# Exhibition contents

The exhibition is based on a set of panels, pictures and drawings, dioramas (glass boxes showing insects), films and games, split in 3 spaces : the entrance, wild bees discovery, the relationship between human beings and bees (threats and decline, simple acts to preserve wild bees).

## ■ GENERAL PLAN AND VISITOR TRAIL



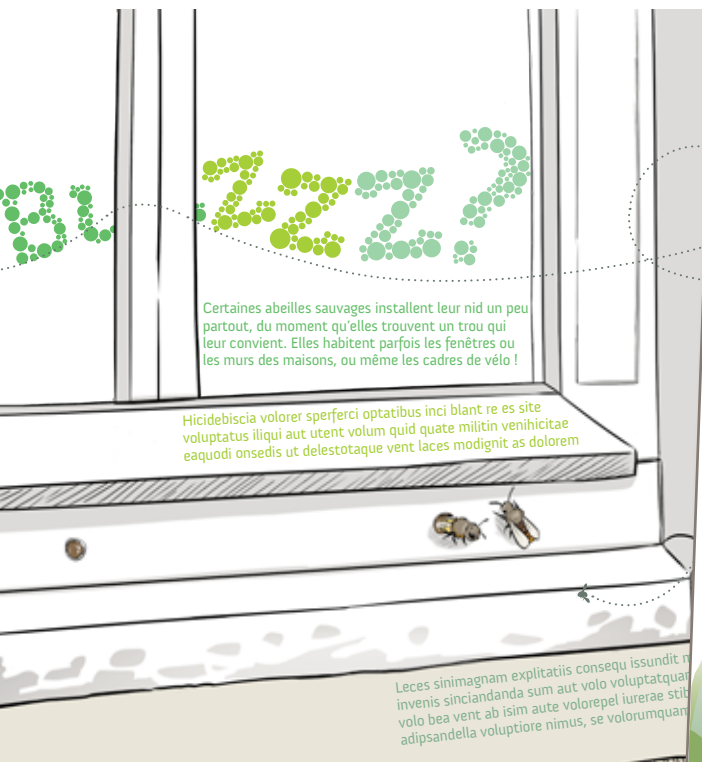
*Visitor trail and location could be different depending on space available.*

- |                             |   |
|-----------------------------|---|
| 1 Research at your doorstep | 3 Bees morphology                       |
| 2 Bees stories              | 4 Threats and decline                   |
|                             | 5 Bees in cities, a shelter to be built |

The exhibition is trilingual (French, English, German: languages order is always the same). A color matches to each language; in that way each visitor can easily find its bearings.

3 reading levels clearly identified in their layout and font size are proposed to visitors :

Panneau	Public	Nombres de caractères
Introductory texts ( <i>introduces main topics</i> )	≥ 12 years old	About 100 words per language max
Further texts ( <i>presents more specific informations</i> )	≥ 12 years old	About 230 words per language max
Funniest texts ( <i>written for 7-12 years old reading age</i> )	All ages	About 50 words per language max



Funniest panel example



Thematic panel example (to learn more)





Exhibition title

ENTRANCE

Diet game

Bee size

H: 160 cm

L: 200 cm

Main text



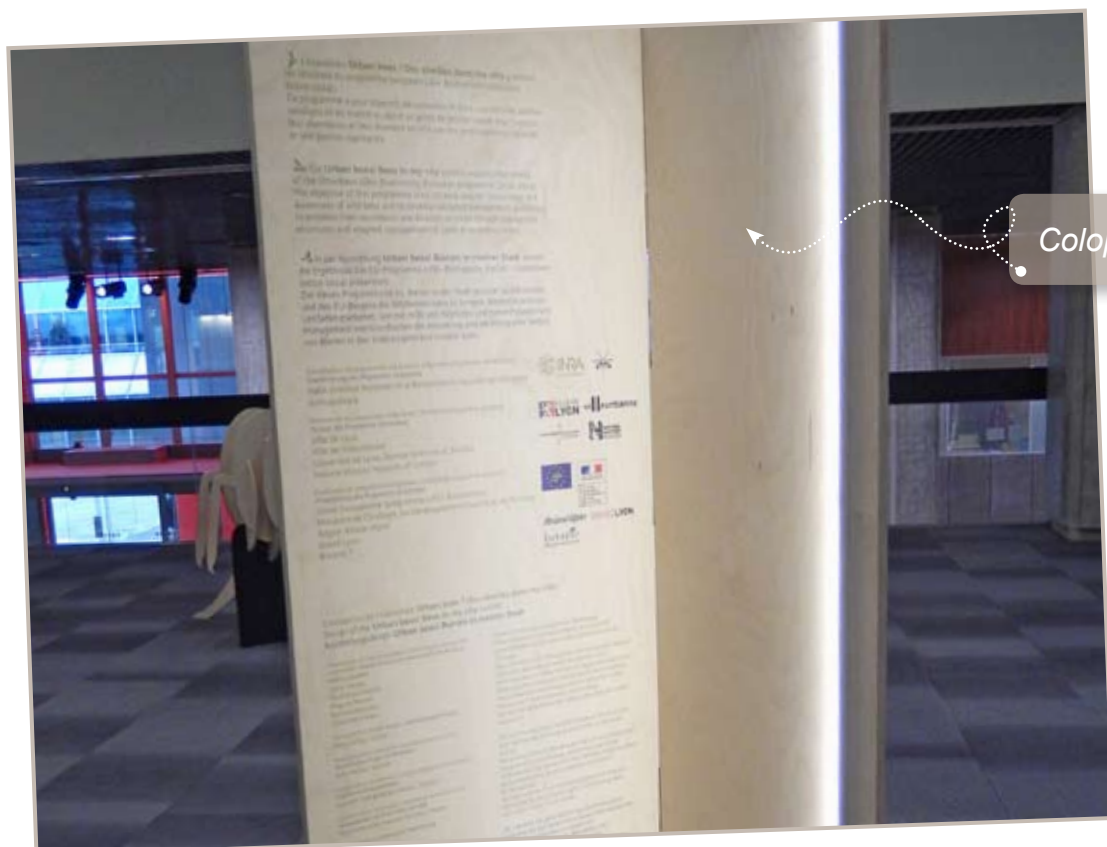
This component is accompanied with a soundtrack mixing bee, urban and natural sounds, human voices... in order to help visitors to get in the subject.

### How to play « diet game »

This game places young visitors (7-12) in a world without bees: what food couldn't they more eat without bees' help to pollinate our food ?

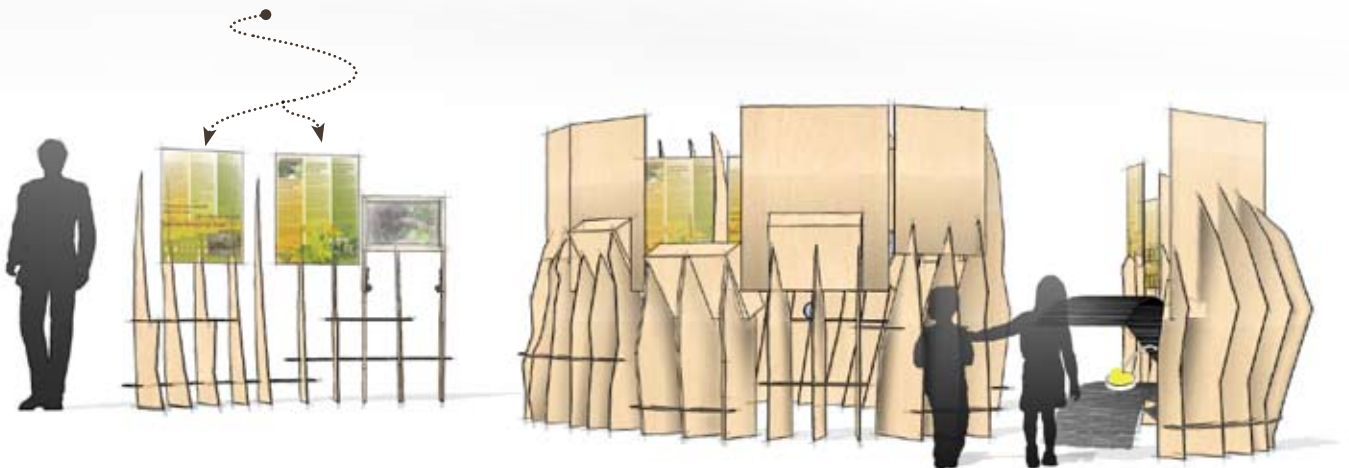
chooses aliments to compose his menu and places them on his plate. If he chooses aliment which production depends on bee pollination, the plate « rejects » the ingredient (game using magnetic polarization).

Game instructions are written on the table, in the little space corresponding to the end of bee's abdomen.





*Trilingual thematic panels*

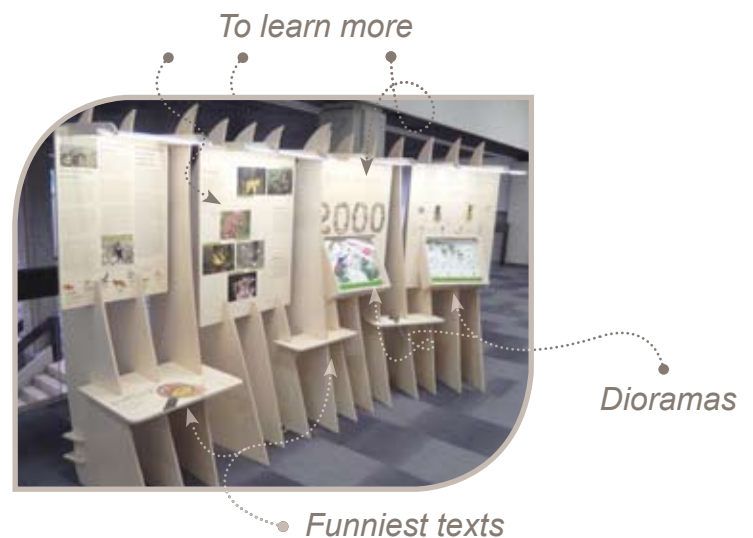


## Components description

### 1. Research at your doorstep



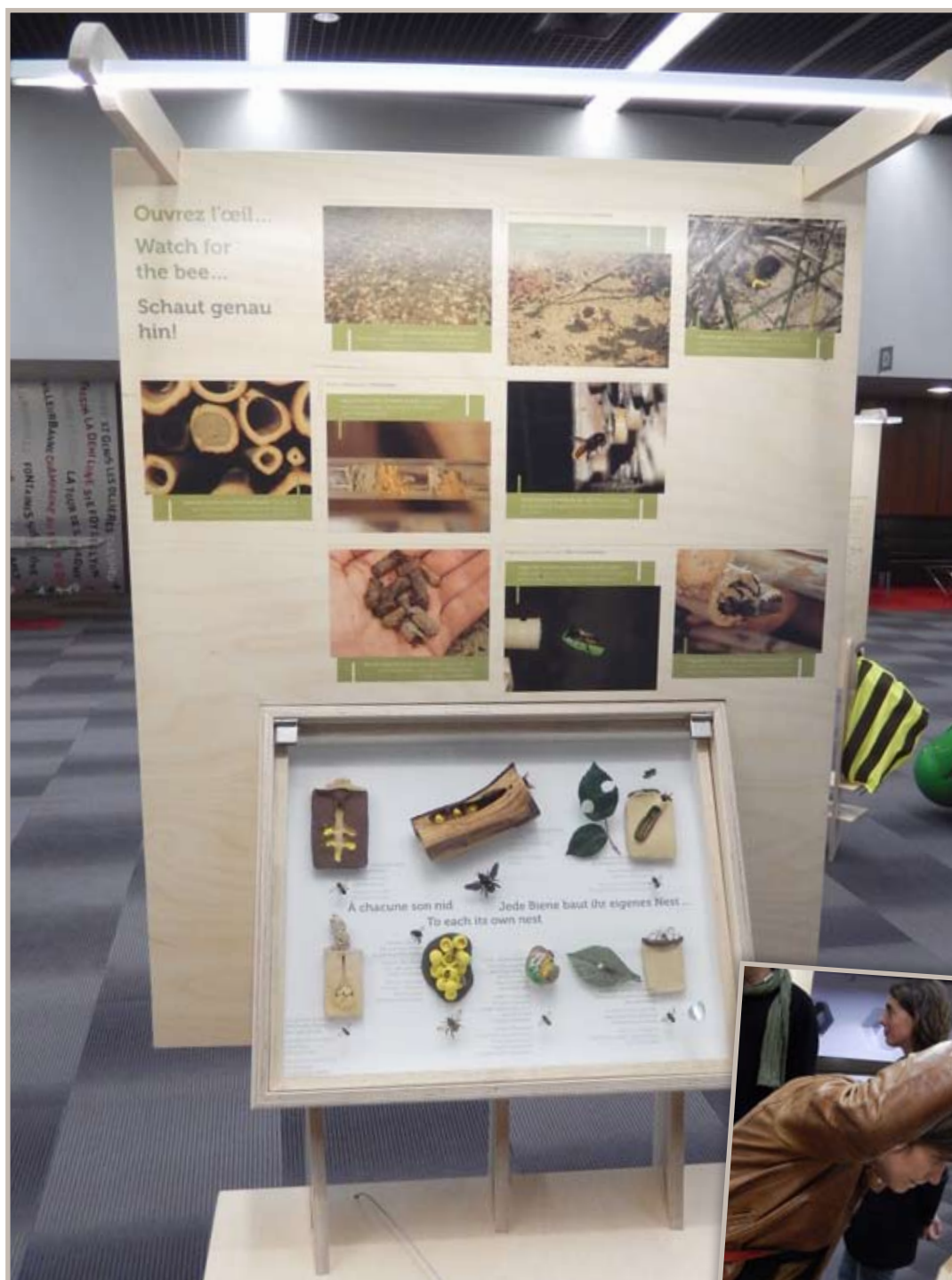
### 2. Wild bees discovery (species diversity, life cycle)



### 3. Wild bees discovery (bees nesting, pollination)











## 4. Pollination, sage example



Sage's flower anatomical model

Game of skill

**How to play**

Game for young audience.



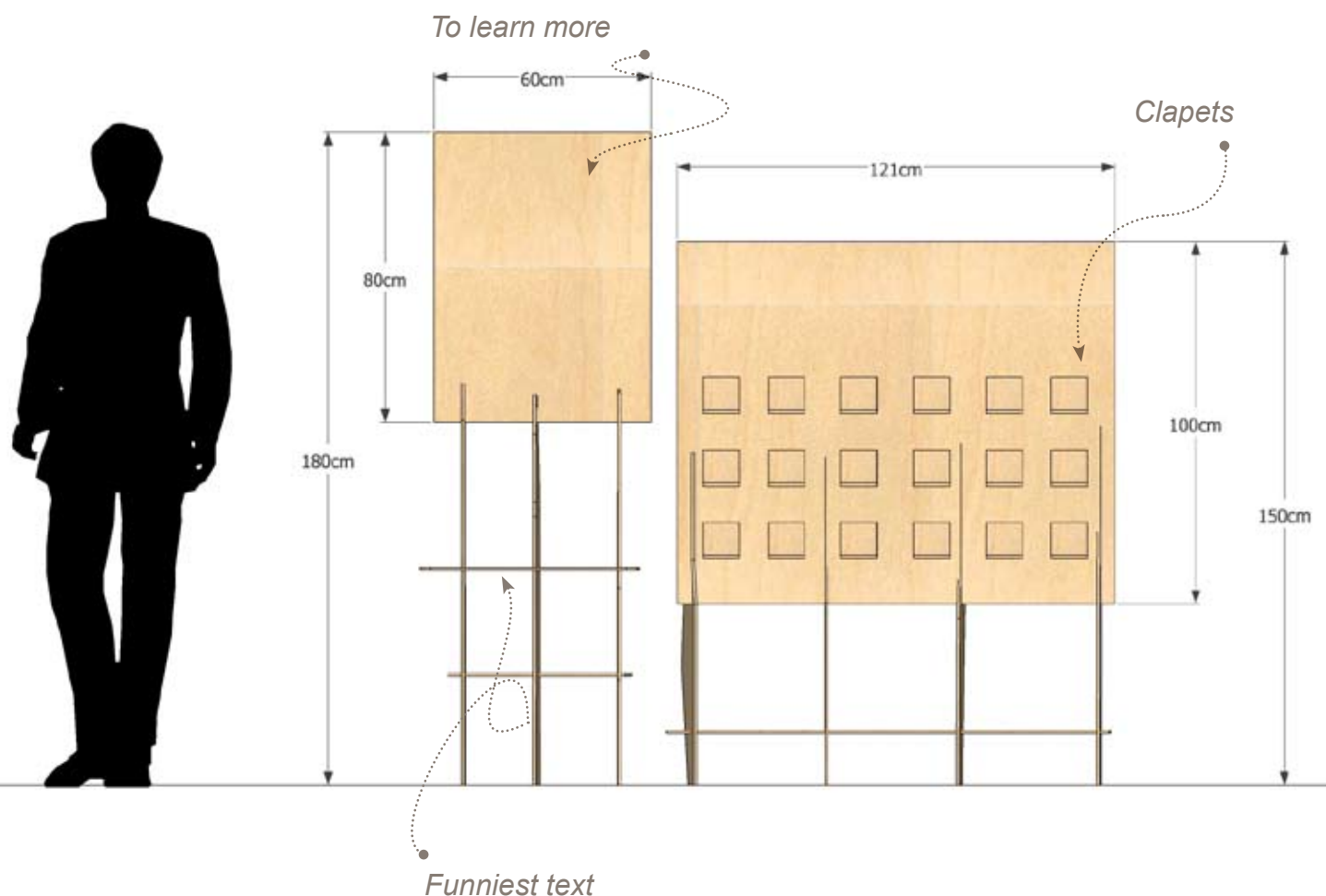
Children will play a bee about to visit a sage flower, looking for nectar. They put on a velcro jacket and they go inside a giant sage flower model (in the cross-section).

While they're looking for nectar, they push a tiny door connected by a lever arm which activate a giant stamen: balls fall down then and hold on to the velcro jacket. And there they're: the little pollen carriers!

Young visitors are invited to put tennis balls and velcro jacket back.

## 5. Bees morphology

### Anatomical riddle game



### How to play



A macroscopic and microscopical pictures' serie, printed on lids front, are fixed on a vertical surface. Each picture represents one of morphological features of a wild bee species (one picture scale 1 overhangs panel).

Which part of the body is it ?

The visitor can discover it by raising the lid : one picture gives him the answer. An explanation, printed on the lid back, accompanies each picture.



## ■ THE RELATIONSHIP BETWEEN HUMAN BEINGS AND BEES

Double-sided component shaped on urban and periurban area.

### Front

Threats and decline

*Funniest texts*

*To learn more*

### Back

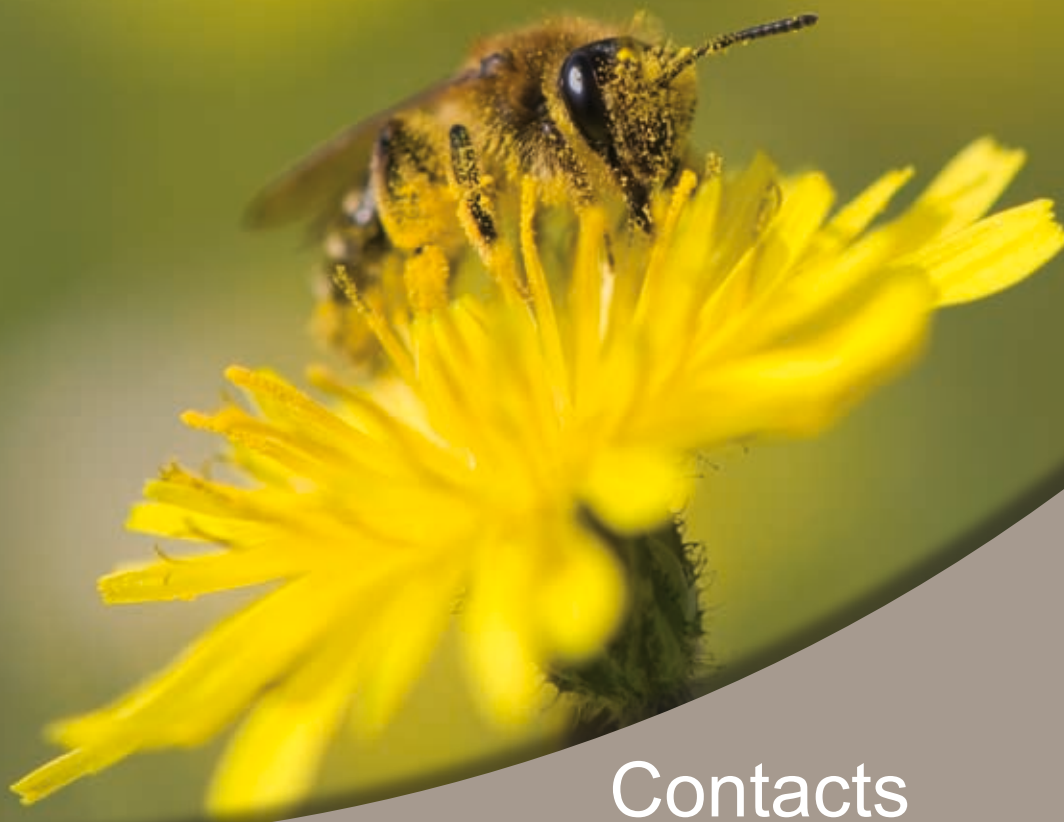
Bees in cities, a shelter to be built

*Nesting walls*

*A comic strip will give useful advices to make gardens or urban balconies welcoming for bees.*







## Contacts

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