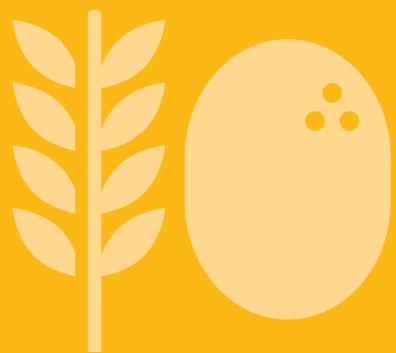
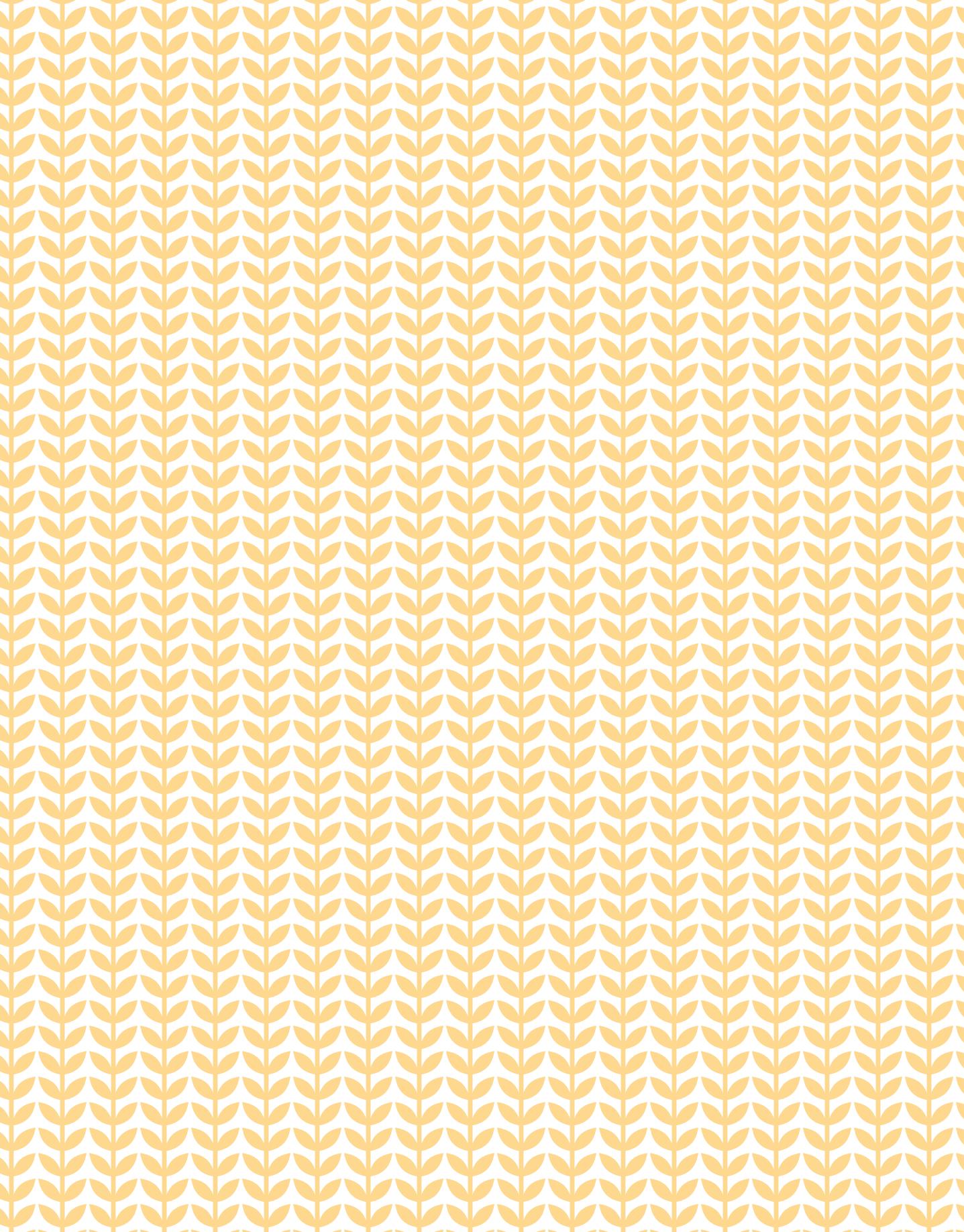
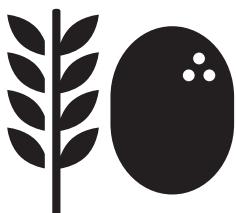


CLUSTER INTERNATIONAL WORKSHOP  
**CEREALS AND TUBERS**





CLUSTER INTERNATIONAL WORKSHOP  
**CEREALS AND TUBERS**



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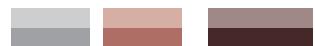
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# CLUSTER



International  
Workshop

Expo 2015 Official Global Partners



In collaboration with

POLITECNICO  
DI MILANO

# THE CLUSTERS: AN INNOVATIVE MODEL OF PARTICIPATION

Expo Milano 2015 has been conceptualized with the ambition to bring the evolution of Universal Exhibitions one step further: an Expo where every program and project is developed putting the visitor experience at the center of the stage, and where the Theme is perceivable in every element of the Exposition, experienced from the very first step inside the site and in every interaction.

This radical change of paradigm is particularly evident in the Cluster project.

Traditionally the Countries unwilling or unable to participate in the Expositions building their own pavilion were grouped by the organizers under common structures, the joint pavilions, where the single Countries maintained inside an individual space to showcase themselves.

Moreover the criteria for grouping Countries under the same joint pavilion have so far been geographical. Continental joint pavilions for Africa, Asia and South America were put in place, or others for significant regional territories and identities. However the idea behind Expo Milano 2015 is to address the theme in every element and in every project. Why not grouping Countries on a thematic basis, rather than geographical, then?

Expo Milano 2015 has developed a participation model that allows Countries to select the solution that best suits their needs and projects. While maintaining the successful key elements of the tradition of Universal Expos, allowing many Countries to participate

with their own sensibility and contribution, Expo Milano 2015 will introduce a significant innovation to the type of exhibition spaces and their placement. Countries will not be grouped according to a geographic principle but according to elements of the Expo theme "Feeding the Planet, Energy for Life".

Working together with the Organizer in developing a common thematic exhibition area, Countries will also retain their identity by creating their own unique exhibition space. Furthermore this solution will allow Countries from different regions and continents to collaborate together, overcoming the traditional geographical divisions of the Exhibition Areas of Expos and therefore enhancing the Universal character of Expo Milano 2015. The Clusters area will be located across the whole site, enhancing the potential dialogue with other elements like thematic areas and other Countries' autonomous pavilions.

Corporate organizations, local authorities, international organizations and civil society can all offer their contribution in terms of events, exhibitions, funding and supporting, catering and commercial activities. Local authorities are already collaborating in the Clusters development with their interest in developing offsite touristic itineraries in the territories that have a strong connection with the theme of the Cluster.

Also the private sector will be asked to come on board and support the development of Cluster project, both financially, as well as in terms of content.

Lastly International organisations are being involved by participating in the Clusters development and by contributing to the thematic elaboration, offering scientific contributions and contents.



SPICES



RICE



ISLANDS



FRUITS AND LEGUMES



ARID ZONES



CEREALS AND TUBERS



COFFEE



COCOA



BIO-MEDITERRANEUM

## INTRODUCTION



In Italy, pasta, pizza and bread are an essential part of daily life, and are all products of cereals. Cereals and tubers account for the primary energy intake in diets the world over, but originate from a wide variety of plants aside from wheat. For example, Bolivia is the largest producer of quinoa, Burkina Faso's staple crop is sorghum and Congo has the fourth highest per capita consumption of cassava. Iraq is a large cultivator of grain and some types of wheat which are the progenitors of the modern wheat. In Liberia the main staple foods are rice, cassava and wheat; in Togo, maize, cassava, yam, rice, plantains, benas and millet. Benin's main staple foods are cassava and sweet potatoes and Mozambique's are maize and cassava.

Confronted with such a wide a variety of products, cultures and landscapes, we identified commonalities among cereals and tubers and not to a particular country. Our three proposals offer high quality functional spaces and a direct communication to the visitors, and articulate each proposal with the interpretation of a unique natural landscape.

The first project, the VALLEY, engenders the idea of a continuous cultivated field, a segment of agricultural landscape running the entire length of the lot. A central spine organizes a sequence of exhibition spaces, and allows access to the pavilions. This artery culminates in the main open space which hosts the primary facilities: shopping area, food court and event stage.

The second project, the FIELD, recreates the experience of being in the middle of a field, with thousands of vertical rods. This concept unifies the disparate elements of the cluster in an unitarian form, screening the pavilions and merging everything into one landscape.

The third proposal, the PLAINS, reproduces the openness and the horizons of the cultivated countryside using mirrored surfaces. The visitors wander through the dim hallways which, like in cloisters, give access to the pavilion and the mirrored virtual space of the infinite countryside.

In Italia, pasta pizza e pane sono alimenti derivati dai cereali che sono parte essenziale dell'alimentazione di tutti i giorni. Cereali e tuberi sono alla base dell'alimentazione di molte aree del mondo, e non c'è solo il grano. Per esempio, La Bolivia è il primo produttore mondiale di quinoa, in Burkina Faso l'alimento di base è il sorgo e il Congo è il quarto consumatore per capite di cassava. Che è anche, insieme alla patata dolce, il cibo più diffuso in Benin; in Mozambico la base alimentare è composta da cassava e mais, in Liberia la cassava si divide il primato con il grano e il riso e in Togo si producono soprattutto mais, cassava, yam (igname), riso, piantaggine, fagioli e miglio. Di fronte a questa varietà di prodotti, di culture e di paesaggi diversi, abbiamo identificato dei tratti comuni che si riferiscono più alle coltivazioni che ai diversi paesi.

Le nostre tre proposte mirano a offrire spazi funzionali e di forte impatto comunicativo, e ognuna delle tre sviluppa l'interpretazione di uno specifico paesaggio rurale.

Il progetto VALLE mostra un campo coltivato che attraversa l'intero lotto, una spina dorsale che distribuisce gli spazi espositivi e gli accessi ai padiglioni. L'arteria culmina in un grande spazio aperto che ospita le tre attrezzature comuni, il mercato, il ristorante e l'area per eventi.

Il progetto CAMPO, con una folla di pali verticali ricrea l'esperienza di trovarsi nel mezzo di una coltivazione di cereali. L'idea conferisce al cluster una forte unitarietà, scherma i padiglioni e immerge tutto in un unico paesaggio.

Il progetto PIANURE realizza l'apertura sconfinata e gli orizzonti aperti dei campi coltivati utilizzando superfici specchianti. Il flusso dei visitatori si disperde tra gli spazi ombreggiati davanti ai padiglioni e la grande estensione riflessa del paesaggio infinito.

INTRODUZIONE

GENERALE

# THE FIELD

## Students

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In this proposal the visitor is immersed in a towering field of grain, enchanted by the sensation of getting lost among the stalks of grain. A gust of wind carries the visitor through the spaces defined by the different density of the steel tubes that mimic the stalks of grain. The clearings that lie between the stalks host varied group activities such as an outdoor restaurant, open air market and event space. Visitors meander through the different areas, sampling foods made from cereal and tubers as well as having the opportunity to buy specialty products from host countries. The transparent façade and irregular distribution of pavilions in plan hide the conventional geometry of their form, which is only perceived as a diffuse volume of light.

Un grande campo di grano dove è possibile sperimentare una sensazione di apparente disorientamento. La curiosità di un ambiente eccezionale trasporta il visitatore attraverso degli spazi definiti dalla diversa densità degli steli che simulano le spighe. Le radure che si celano tra le spighe ospitano le diverse attività collettive, dal ristorante al mercato all'aperto, luoghi in cui i visitatori passeggiando possono gustare i diversi cereali e tuberi, comprare i prodotti in vendita, assistere agli eventi speciali. I padiglioni, disposti liberamente all'interno del campo, sono circondati dalla vegetazione artificiale che ne filtra la percezione e li rende evanescenti volumi di luce.

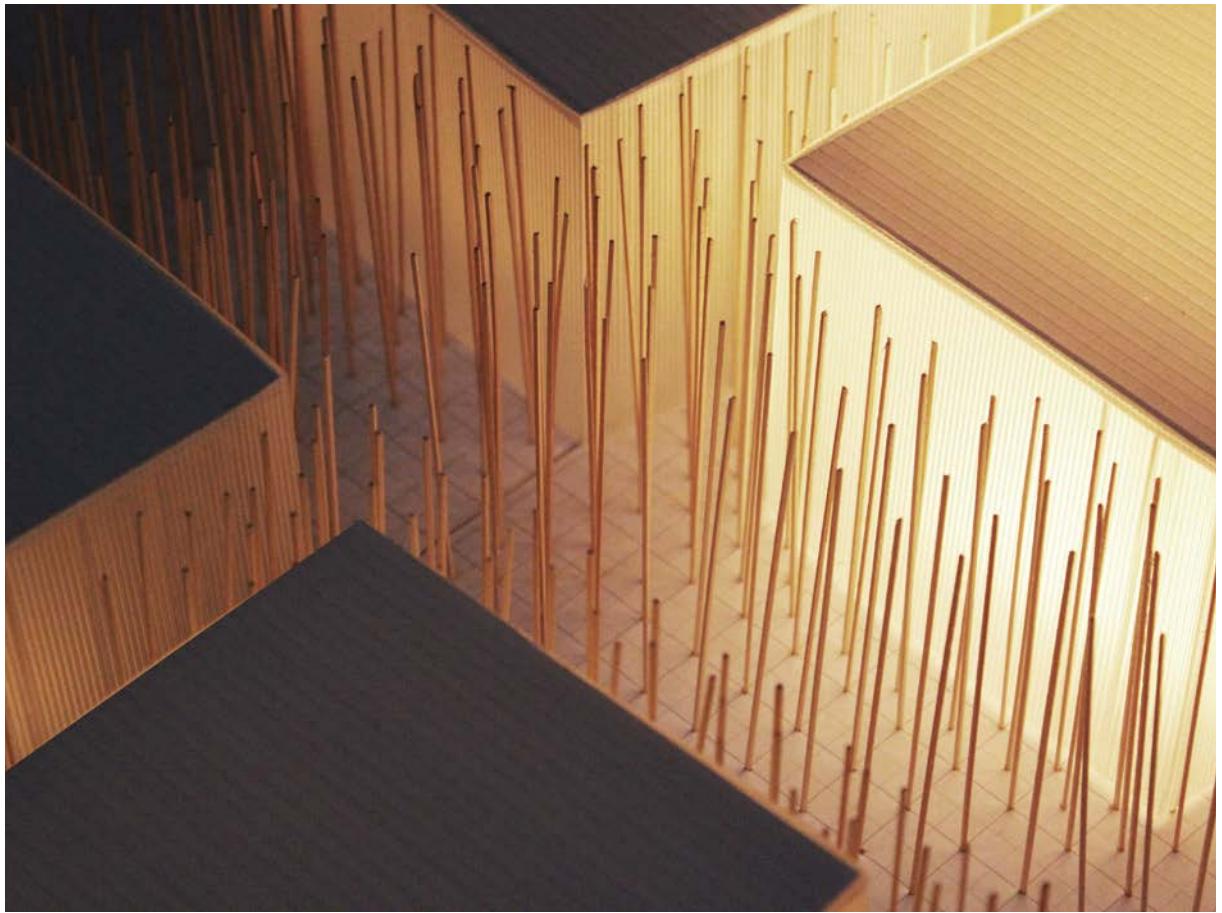


PHOTO MODEL

FOTOGRAFIA DEL  
MODELLO

**THE FIELD**

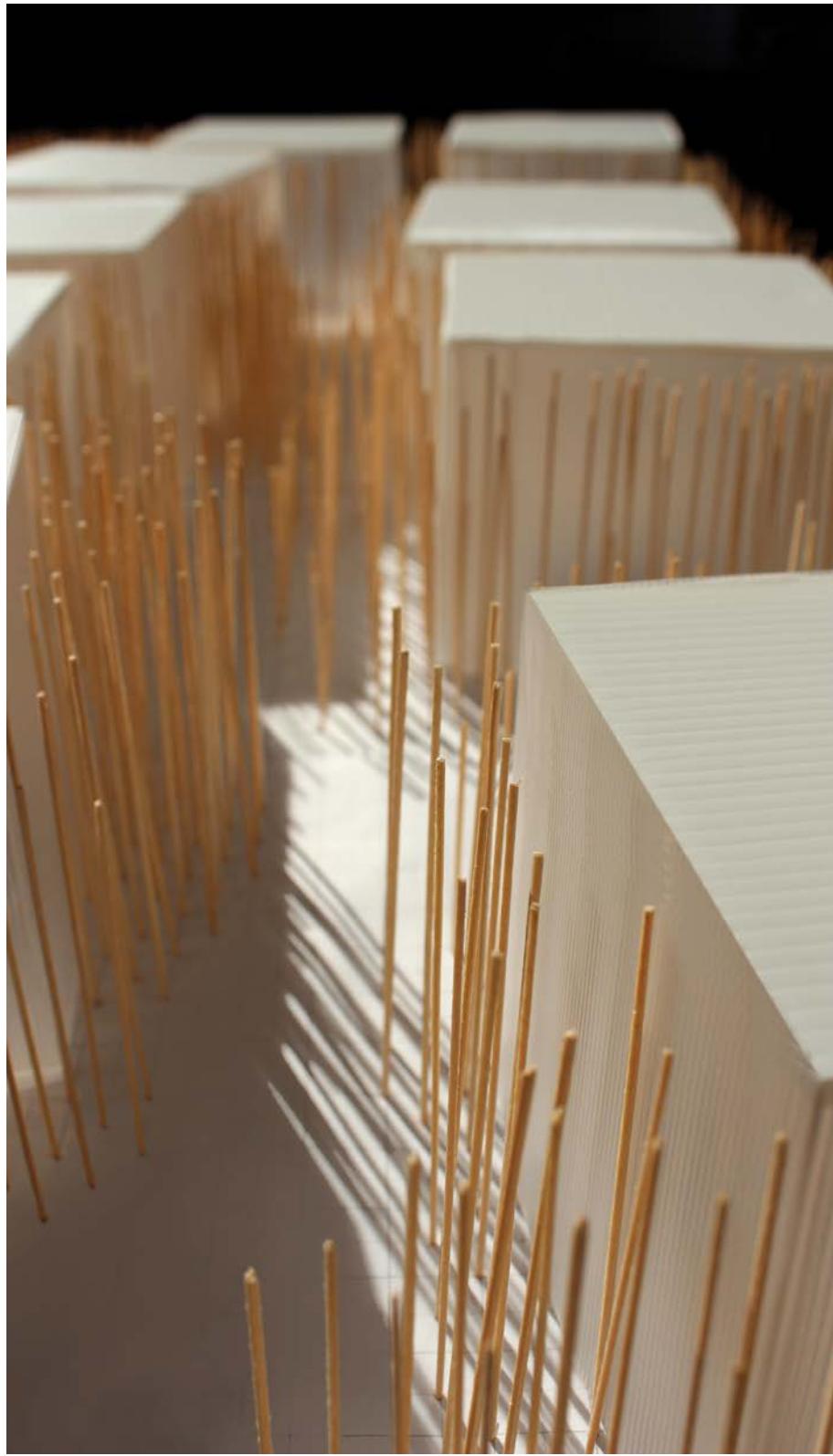


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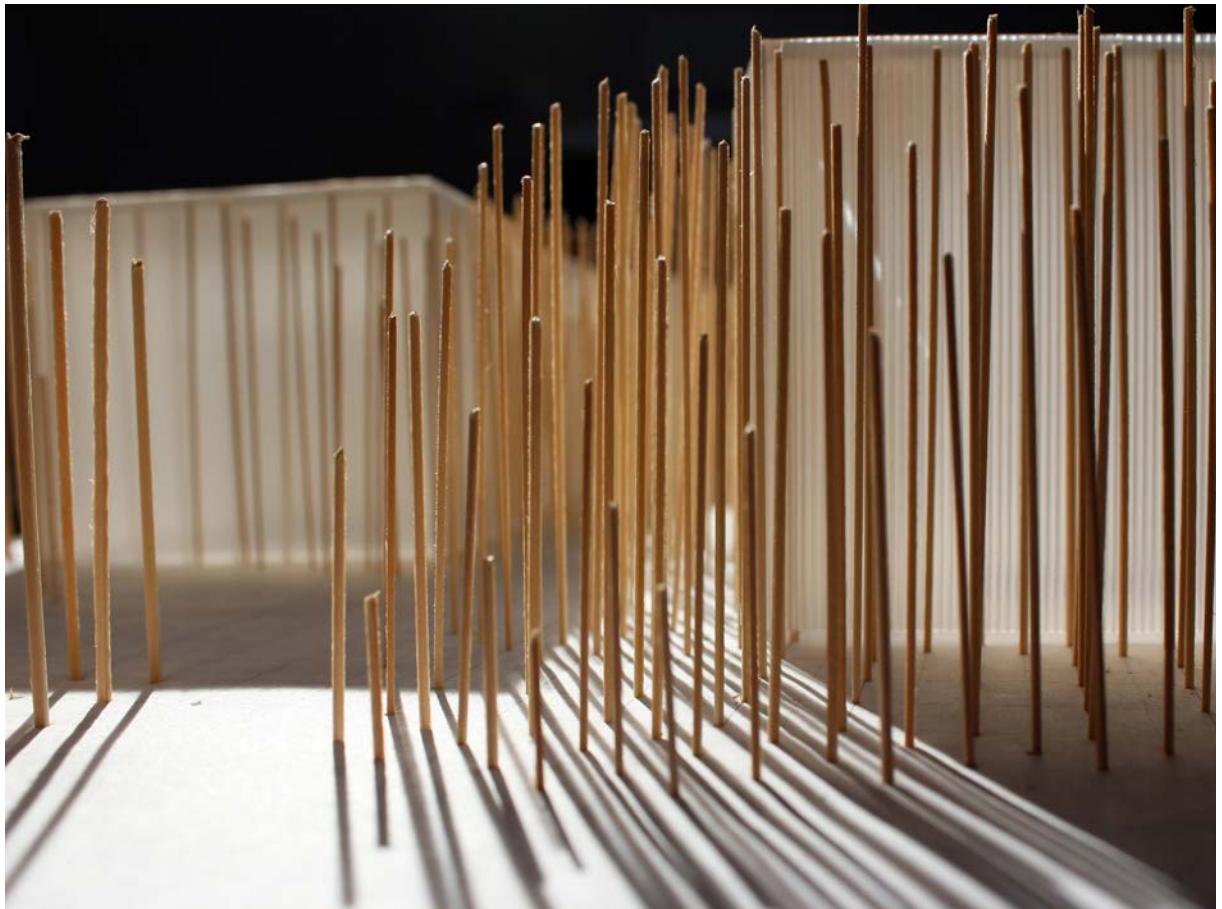


PHOTO MODEL

FOTOGRAFIA DEL  
MODELLO

**THE FIELD**



PLAN

PIANTA



RENDER

RENDER

**THE FIELD**



SKETCH

SCHIZZO

# THE PLAINS

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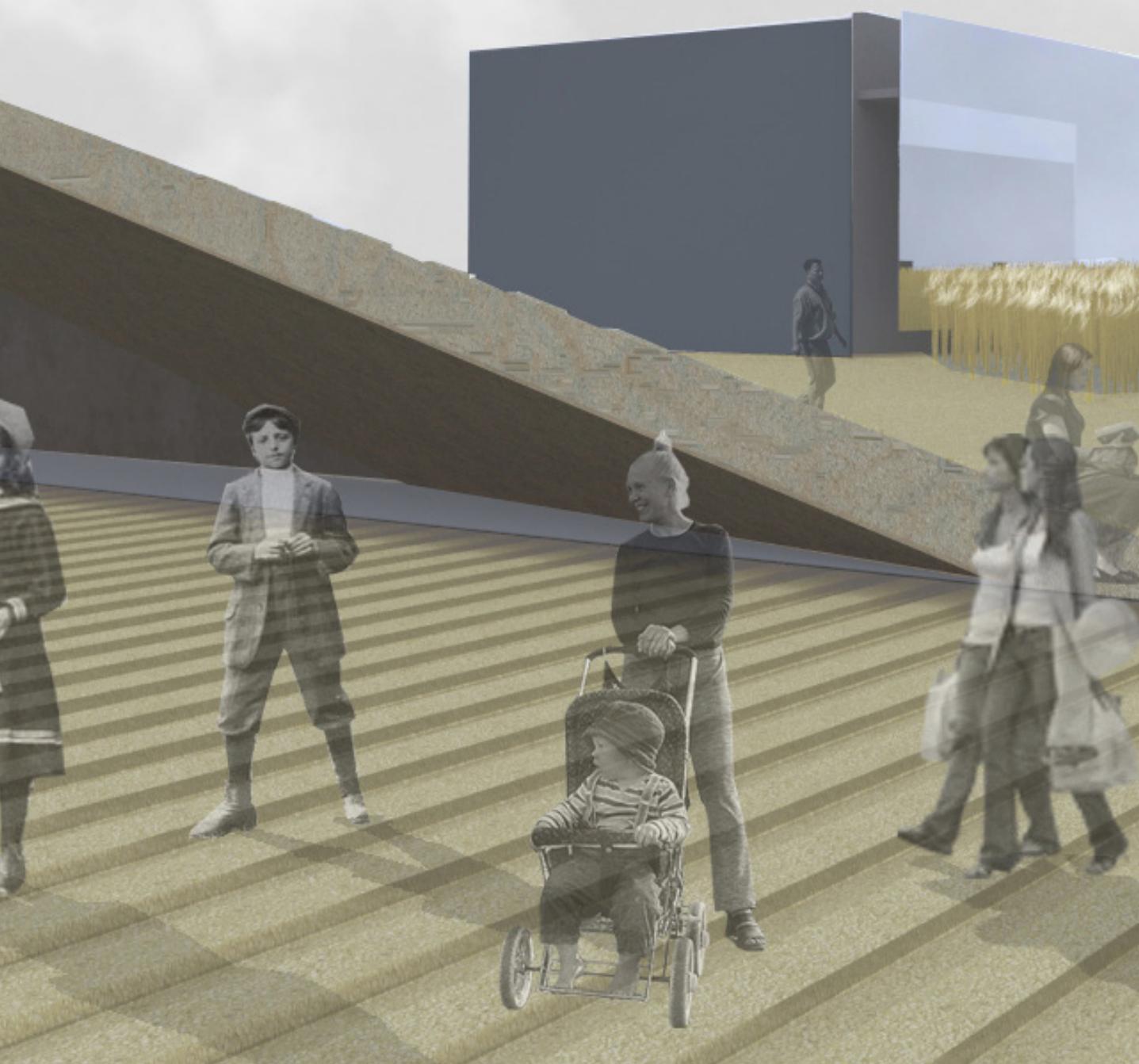
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Sarah Leenen - Parsons School of Design

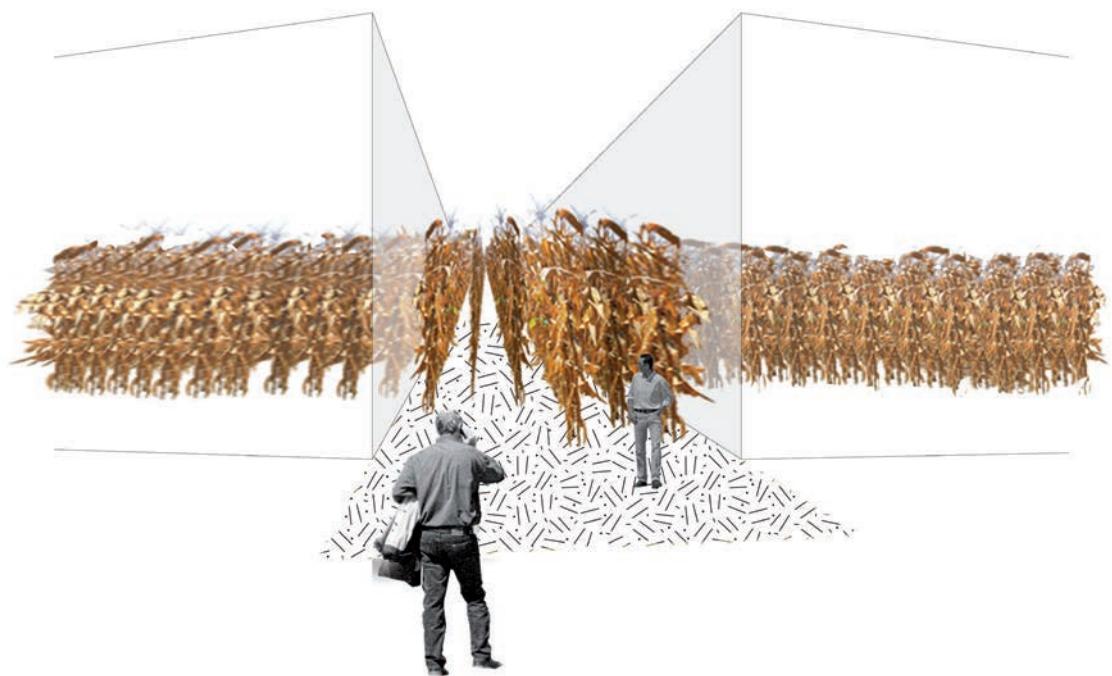
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Weibing Ding - Politecnico di Milano



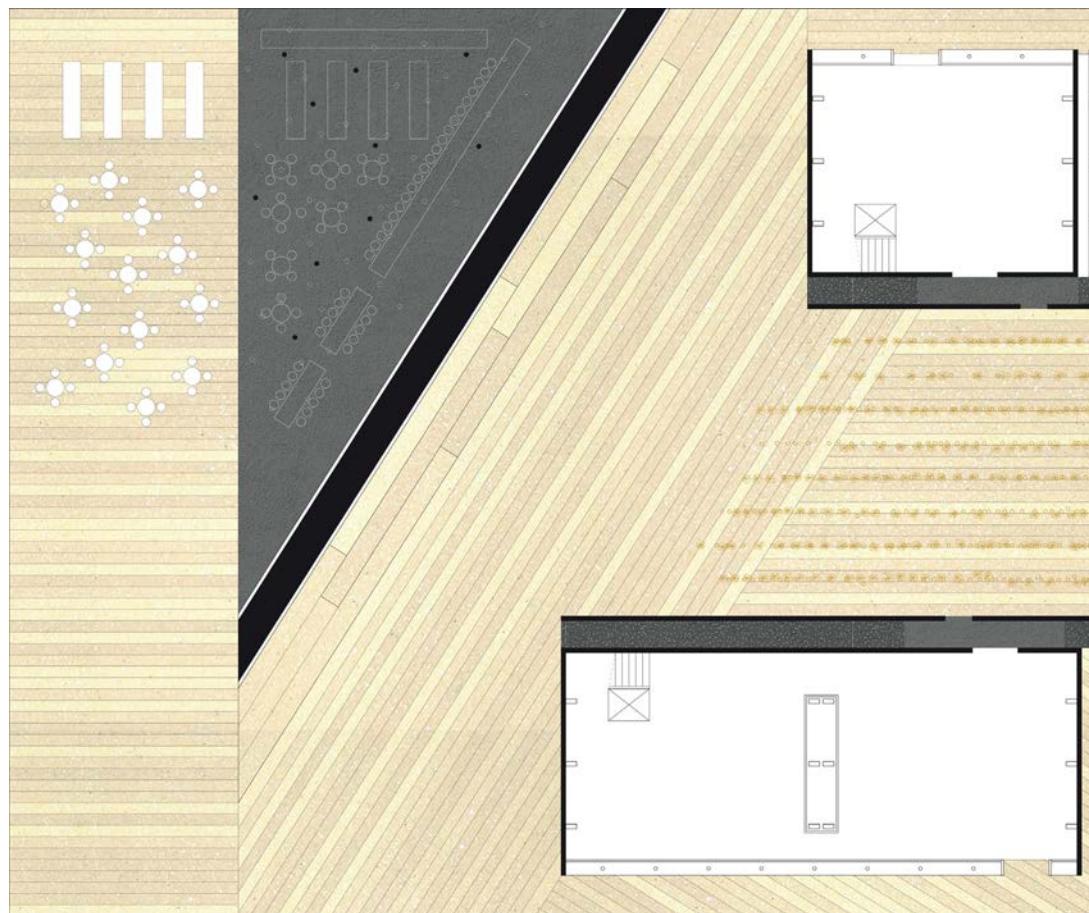


“Fold up” the ground to discover the “roots” and “shape the surface” with the same principles of cultivating a wheat field. The project starts from this simple analogy, developing into a narrative of cereals and tubers and their nature. The fascination that drives the project is linked to the perception and the sense of loss one feels being in a field of grain, where the lack of any reference point is amplified by repeated and infinite ordered rows of wheat. Sollevare la terra per scoprire le radici e modellare la superficie con gli stessi principi di un campo di cereali. I due temi sono il terreno che si solleva e la moltiplicazione di un campo di cereali attraverso la creazione di uno spazio che si specchia all’infinito liberando, nell’alta densità dell’Expo, una spazialità aperta altrimenti impossibile. Entrare e uscire dai padiglioni, sarà quindi un passaggio graduale tra aree illuminate, ambienti più ombreggiati e la luminosità virtuale delle pianure riflesse.



CONCEPT

CONCEPT

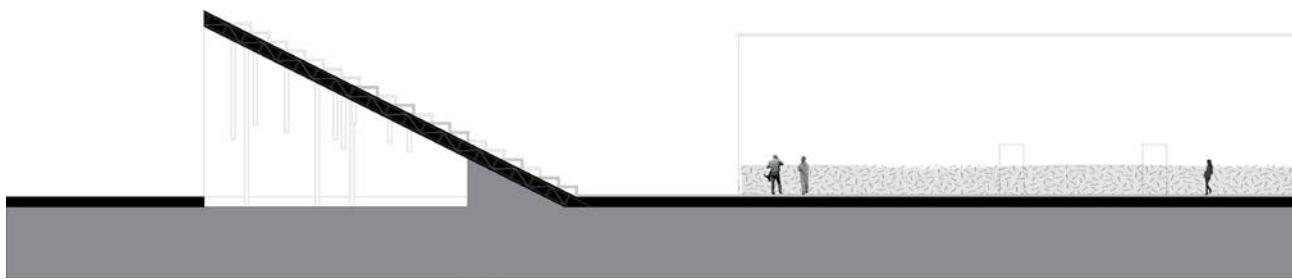


GROUND FLOOR

PIANTA PIANO TERRA

**THE PLAINS**

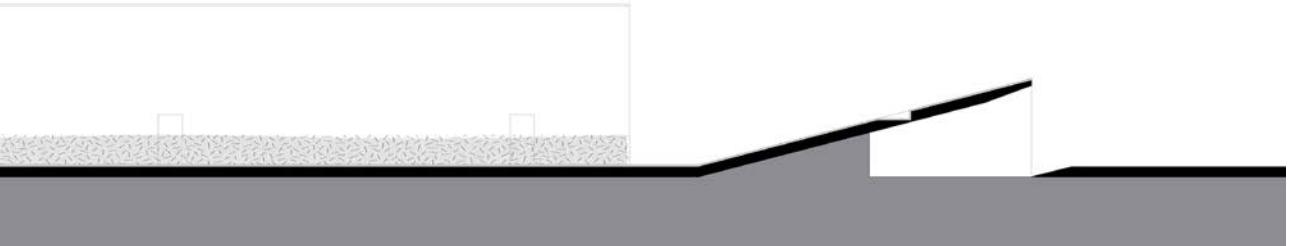




LONGITUDINAL SECTION

SEZIONE LONGITUDINALE

**THE PLAINS**





SURFACE OF THE PLAINS

SUPERFICIE DEL PIANO

**THE PLAINS**



# THE VALLEY

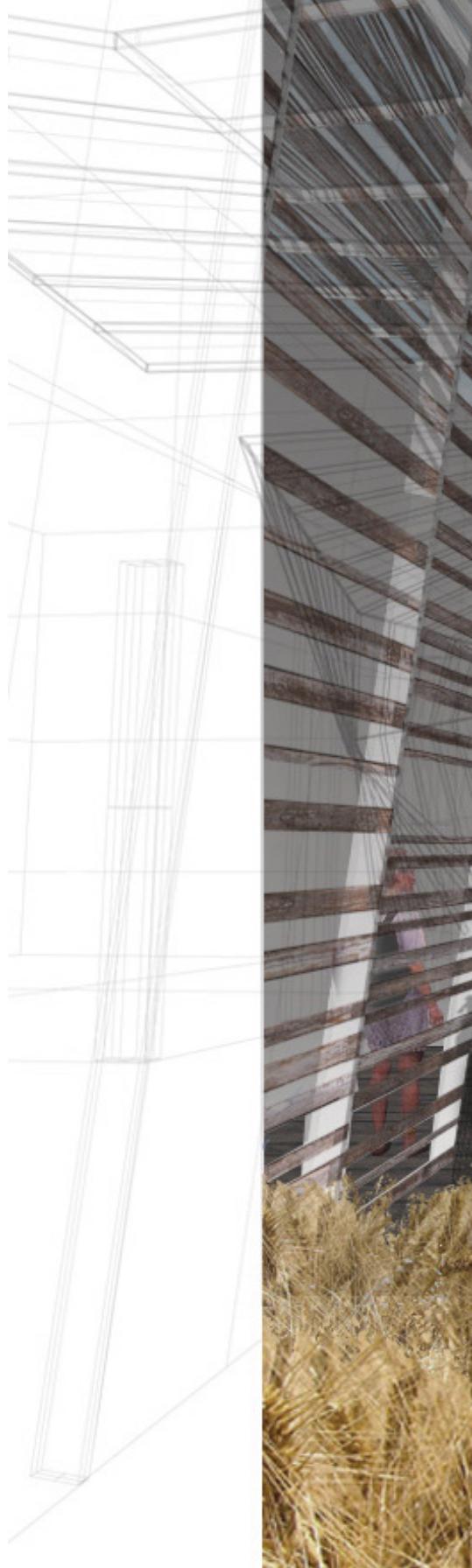
## Students

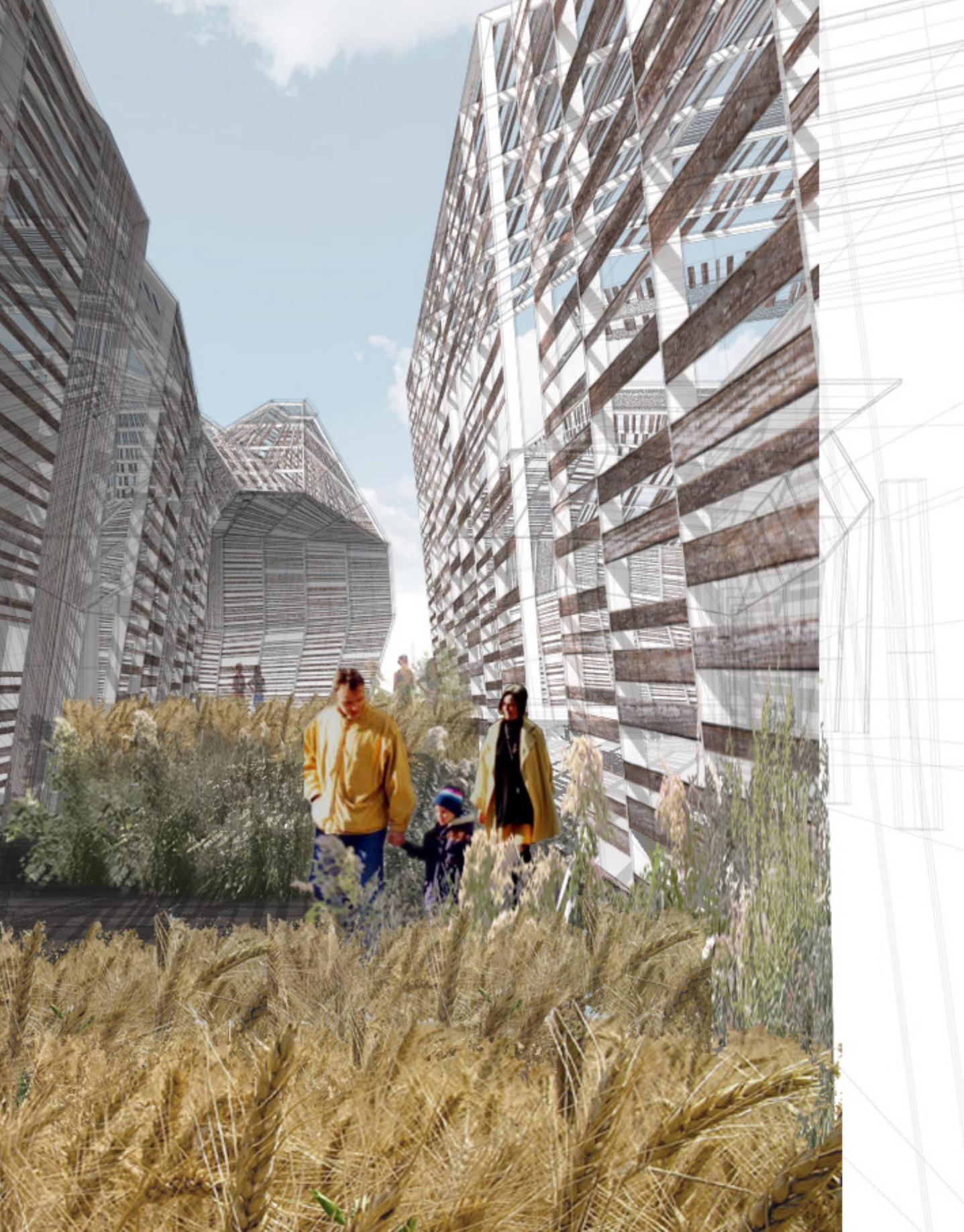
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A multisensory experience guides the visitor through a progression of colors, textures and scents to create an informative and memorable visit. A river cultivated with cereals and tubers “flows” through the pavilions, ending in a large covered hearth which also houses all the communal activities. Here the visitor has the opportunity to bake and taste their own bread. The canopy acts as a filter between the pavilions and the cultivated landscape, creating shaded areas, views, and a path covered with a continuous pergola that recreates the form of an artificial valley. Un’esperienza conoscitiva basata sulla sensorialità e sulla comunicazione: un campo coltivato a cereali e tuberi scorre come un fiume guidando il visitatore fino a una grande copertura che accoglie le attività collettive. Le tettoie leggere davanti ai padiglioni creano spazi ombreggiati, scorci visivi, e un percorso pergolato che si modella in una valle artificiale. Nell’ampio spazio raccolto attorno al grande camino, attraverso l’utilizzo del forno collettivo il visitatore potrà assaggiare i vari prodotti derivati dalla cottura di cereali e tuberi.



LANDSCAPE

PRODUCTION

TRADING

EATING



PLAN

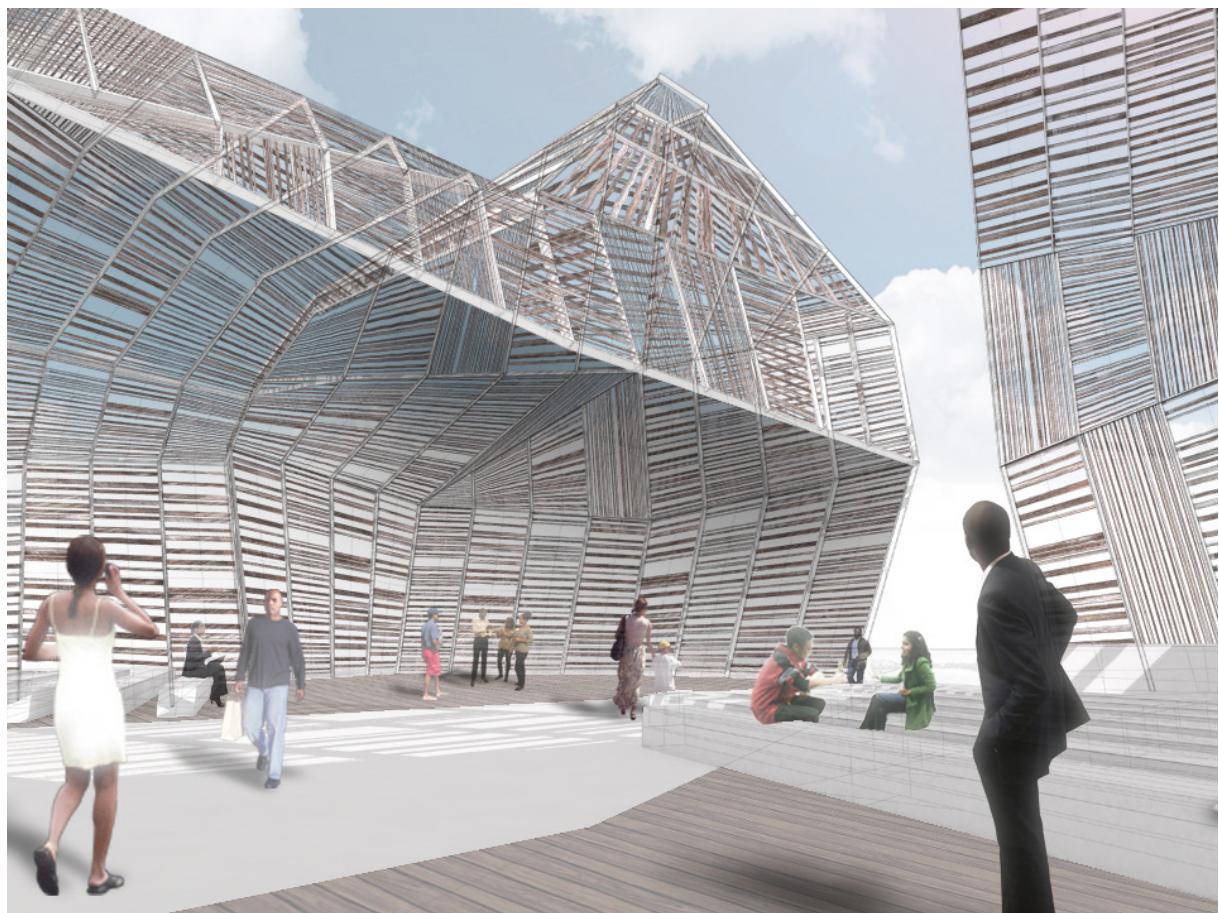
PIANTA



RENDER

RENDER

**THE VALLEY**



RENDER

RENDER

SECTION

SEZIONE

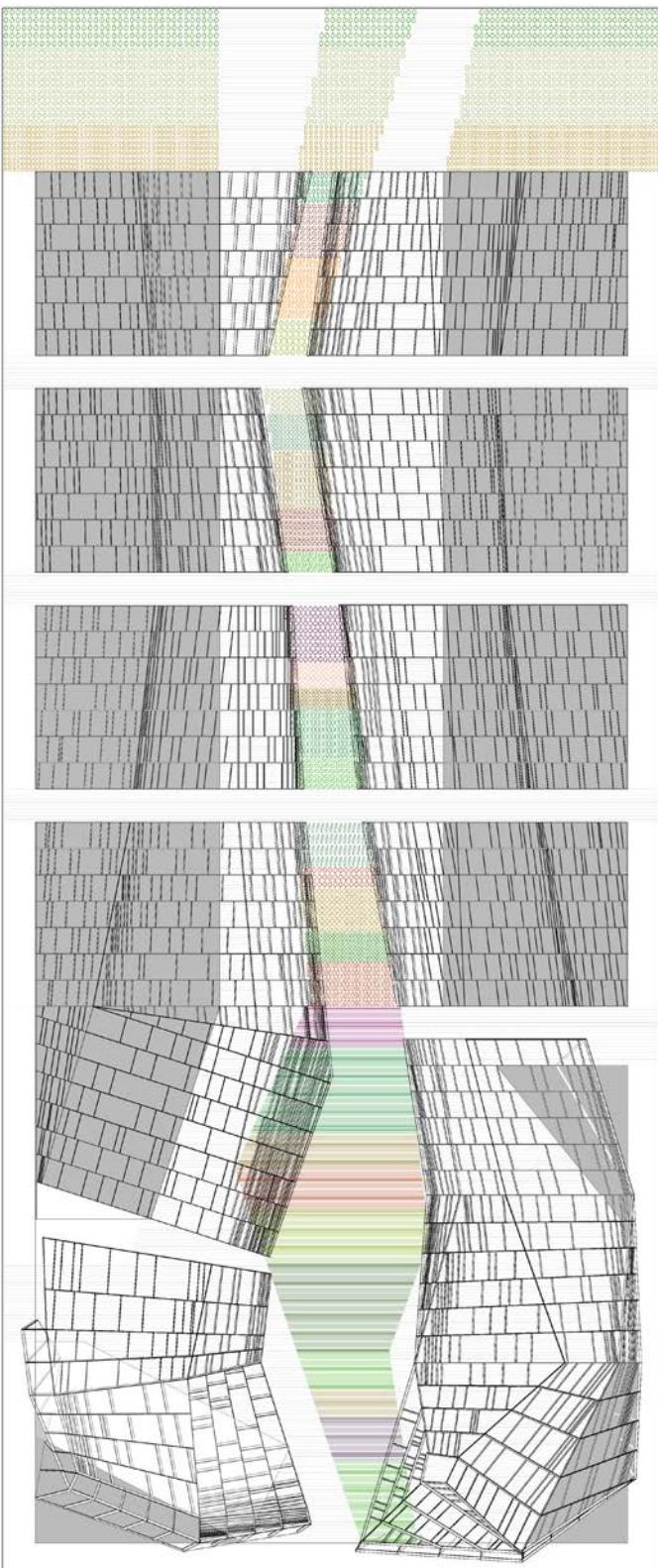


SECTION

SEZIONE

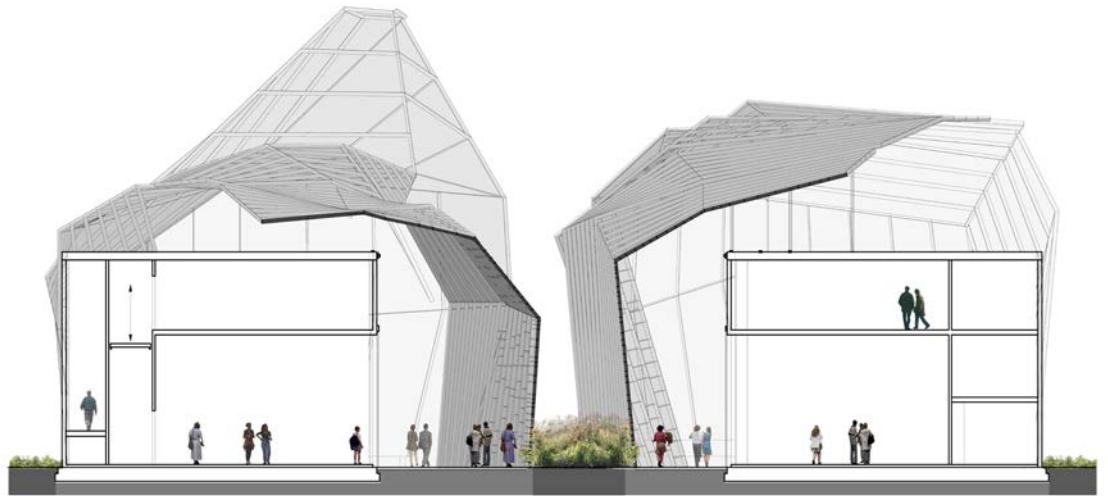


**THE VALLEY**



SECTION

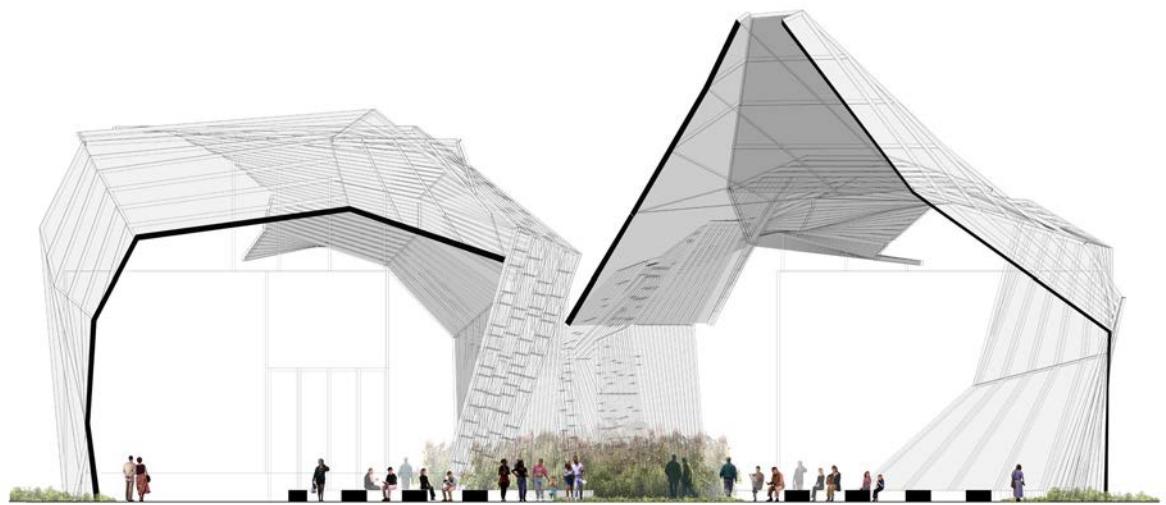
SEZIONE



ENTRANCE

ENTRATA

**THE VALLEY**



IN THE VALLEY

NELLA VALLE

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