

# ARCHI VISION

DL



MANNI GROUP

# Colophon

# Sommario/Summary

## ARCHIVISION DL - inserto

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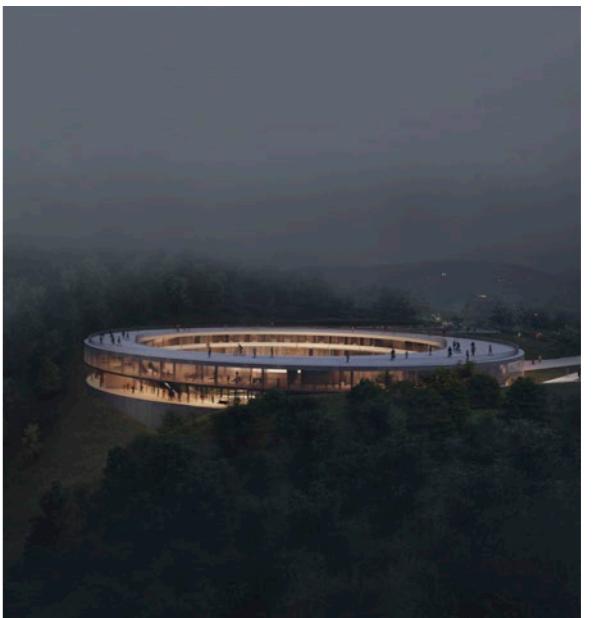
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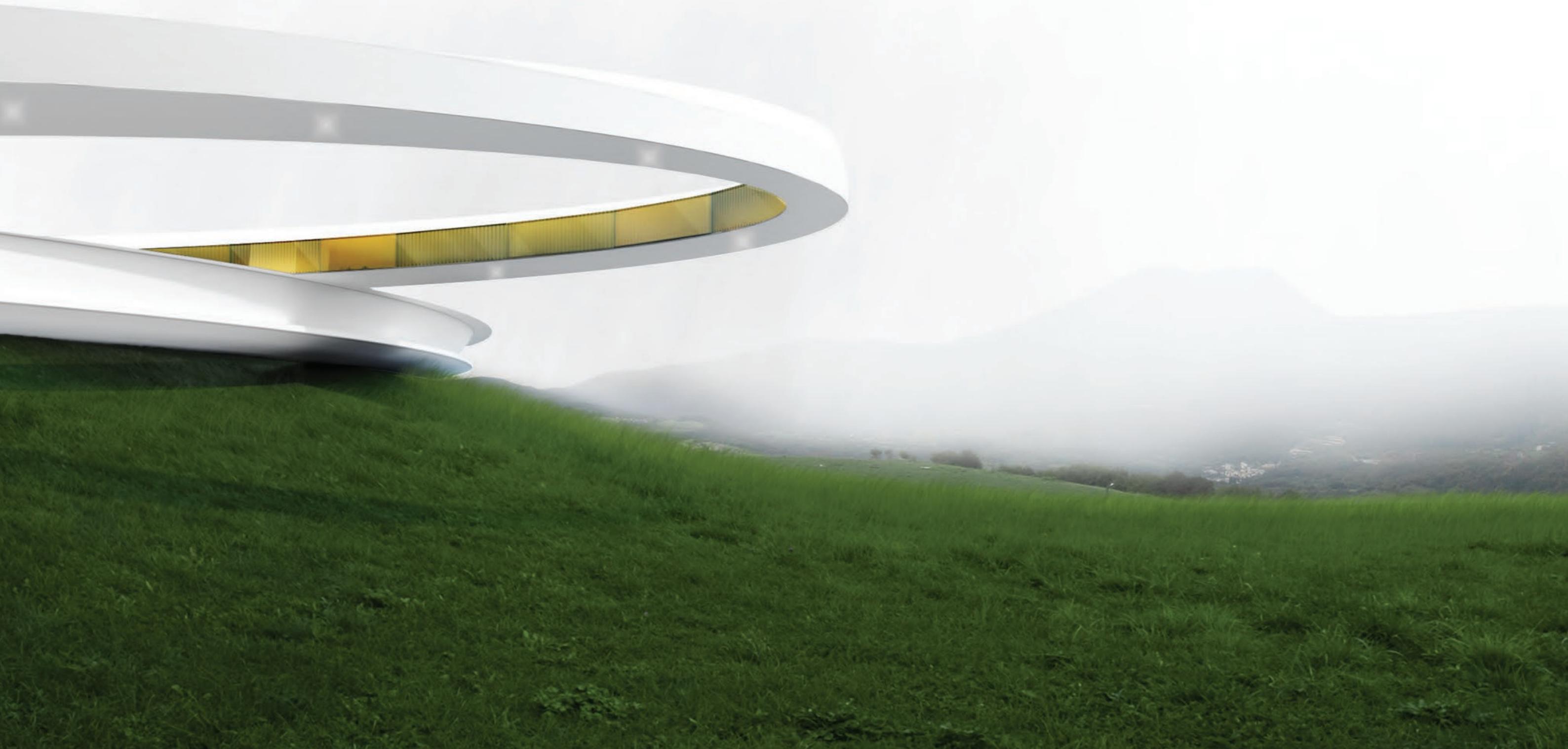
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**DL**



# Data Landscape



## Un fiume di dati

"I dati saranno il nuovo petrolio".  
Alec Ross.

**M**etaverso, avatar, criptovalute. Il mondo digitale ha ormai raggiunto una dignità analoga al mondo materiale e quale che sia l'attività che svolgiamo online, questa, in termini empirici, ha un'univoca e definitiva implicazione: dati.

A dispetto della propria apparente volatilità, i dati digitali hanno radici profondamente materiali: necessitano di spazi fisici per essere archiviati, di tecnologie per essere messi in sicurezza, di enormi quantitativi di energia per essere costantemente raggiungibili.

I data center sono la traccia materiale del mondo digitale: e tanto più il secondo si espande, tanto più i primi si moltiplicano, acquistando valore ed un ruolo fondamentale per la società del domani.

Per lungo tempo considerati infrastruttura più che architettura, numerose recenti sperimentazioni mostrano come i datacenter possano divenire punti di riferimento delle moderne città, offrendo un'opportunità di riscatto inedite ad architetture abbandonate e a luoghi dismessi.



## A river of data

"Data will be the new oil".  
Alec Ross.

**M**etaverse, avatar, cryptocurrencies. The digital world is just as real as the material world. Whatever the activity we carry out online, its ultimate and univocal implication in the empirical world will be data.

Despite their apparent volatility, digital data have deeply material roots. Physical spaces are needed to file them, technologies are needed to secure them, and huge quantities of energy are needed to access them at any time.

Datacentres are the material trace of the digital world. The more this world grows, the more they multiply, thus acquiring an essential value and playing a key role for the society of the future.

For a long time, they have been considered infrastructures rather than architectures. Yet, numerous recent experiments show that datacentres can become landmarks of modern cities. They can be an opportunity to repurpose abandoned architectures and places that are no longer in use in an innovative way.

This is the case of a former military bunker along the Venetian Prealps. It is an architecture that is considered difficult to reuse due to the presence of isolation segments and underground spaces – characteristics that, in fact, turn out to be advantages when building a datacentre.

How to make the most of the characteristics of a military architecture in designing a modern datacentre? How to integrate this function into the jaw dropping landscape?

These are the underlying questions of Data Landscape. This is Manni Group's competition to imagine a new generation of datacentres which fit in the landscape to generate magnificent and iconic architectures.

Datacentres are the sign of contemporaneity. They are intended to change the face of cities just the way railway stations, factories, and large buildings have always done in order to meet the needs of the time. Taking an interest in datacentres today means writing a significant chapter of the cities of tomorrow.

**“** Il tema della quarta edizione del Manni Group Design Award è più attuale che mai, e aderisce perfettamente ai trend di cui siamo promotori, ovvero sviluppare un'edilizia attenta a migliorare gli impatti sulla comunità e sul territorio attraverso l'impiego di soluzioni innovative dalle alte performance energetiche. Siamo orgogliosi di aver potuto valutare elaborati di altissima qualità affiancati da giudici di elevato spessore. Alta è stata l'attenzione per l'impiego delle tecnologie off-site del Gruppo all'interno dei progetti, aspetto che è stato premiato nel processo di selezione dei vincitori.

I tre team finalisti, provenienti da Germania, Vietnam e Repubblica di Serbia, hanno saputo interpretare la sfida coerentemente con gli obiettivi lanciati, proponendo soluzioni efficienti, dall'alto valore estetico che dialogassero sia con la storia del luogo che con il territorio circostante.”

Enrico Frizzera  
CEO and General Manager of Manni Group

**“** The theme of the fourth edition of the Manni Group Design Award is more topical than ever, and adheres perfectly to the trends we promote, i.e. developing a building construction that is careful to improve the impact on the community and on the territory through the use of innovative solutions from high energy performances. We are proud to have been able to evaluate works of the highest quality supported by high-level judges. Great attention was paid to the use of the Group's off-site technologies within the projects, an aspect that was rewarded in the process of selecting the winners.

The three finalist teams, coming from Germany, Vietnam and the Republic of Serbia, were able to interpret the challenge consistently with the objectives launched, proposing efficient solutions, with a high aesthetic value that dialogued both with the history of the place and with the surrounding environment.”

Enrico Frizzera  
CEO and General Manager of Manni Group

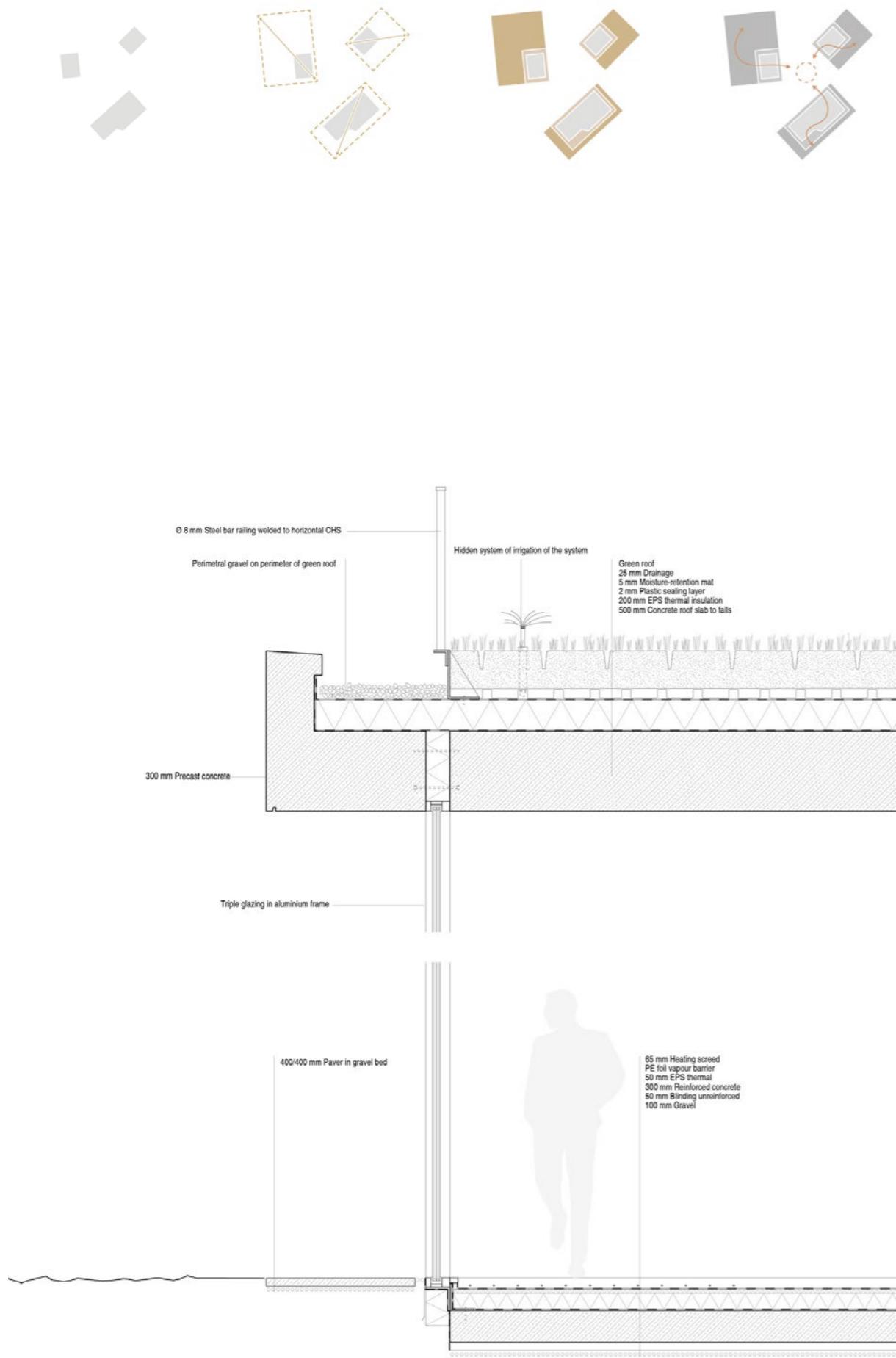
Enrico Frizzera  
CEO Manni Group



Members: ShGuisong  
Zhang, Dian Luo, Xiang  
Liu  
Country: Germany

**1<sup>st</sup> Prize**  
**Atelier**  
**LXL+ZHGS**  
**Data**  
**Landscape**





**N**el parco naturale dei Monti Lessini si snoda un sentiero tortuoso in un'area aperta tra le montagne. Durante Prima Guerra Mondiale, divenne una struttura militare. Un nuovo data center emergerà in questa struttura abbandonata.

La nuova costruzione si estende verso l'esterno rispetto alla vecchia struttura. Il data center, residenze, uffici, e centro comunitario si sviluppano in volumi separati: il data center è interrato per motivi di sicurezza; gli uffici e le residenze di supporto sono semi-interrati, si affacciano sul paesaggio circostante, senza venir meno ad esigenze di privacy; mentre l'area servizi è posta sul piano terra per un facile accesso al pubblico. I tre nuovi volumi sono accostati l'uno all'altro per formare un nuovo spazio di attività centrale, che corrisponde anche alla logica architettonica originaria.

Il tetto si estende orizzontalmente ed è costruito sopra il bunker originale; il nuovo edificio, incorporato nella topografia, si integra umilmente con l'esistente. Salendo sul tetto, il sentiero si articola in erba e poi ghiaia, ed infine a solidi blocchi di cemento - la vecchia struttura è anche il cuore del nuovo edificio.

Il tetto originale è stato rimosso per far posto a un cortile a cielo aperto, dove anche diverse scale e rampe valorizzano lo spazio rustico. Il primo passo per accedere all'interno è il corridoio tra il vecchio e il nuovo edificio, che non solo forma un grande spazio d'ingresso, ma esprime anche rispetto per la storia.

**T**he nature park of Mount Lessini , a winding path leads to an open area between the mountains. During the First World War, it became a military facility. A new data center will emerge in this abandoned facility.

The new construction extends outward from the old structure. The data center, residence & offices, and community center are located in separate volumes: the data center is buried underground for security; the residence and offices, semi-underground, provide a view of the landscape and privacy; and the community center are on the ground for easy access to the public. The three new volumes are enclosed by each other to form a new central activity space, which also corresponds to the original architectural logic.

The horizontally extended roof is built on top of the original bunker, and the new building, embedded in the topography, expresses humility towards the environment. As you walk up to the roof, the path under your feet changes from grass to gravel and finally to solid concrete walls - the old structure is also the core of the new building.

The original roof has been removed to make way for an open-air courtyard, where different staircases and ramps also add interest to the rustic space. The first step into the interior is the corridor between the old and new buildings, which not only forms a great entrance space and also expresses respect for the history.

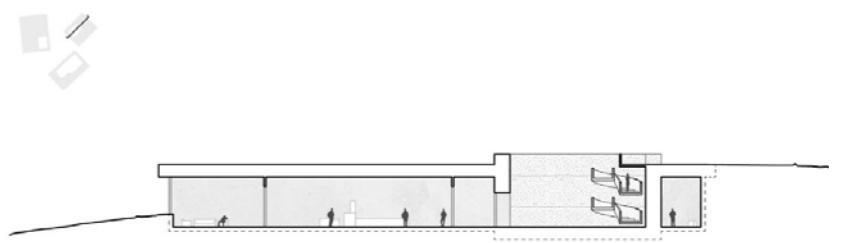
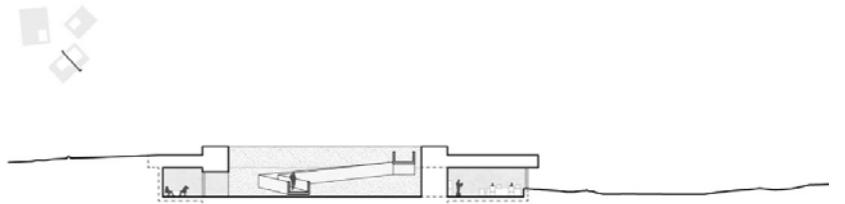


“Di questo progetto ho particolarmente apprezzato la sensibilità nei confronti del contesto paesaggistico, senza rinunciare ad un tratto deciso che individua la contemporaneità dell’opera. Da apprezzare anche l’attenzione ai manufatti preesistenti che in gran parte si sviluppano come sistema sotterraneo.”

Gianandrea Gazzola, membro della giuria

“I particularly appreciated the sensitivity towards the landscape context of this project, without renouncing a decisive trait that identifies the contemporaneity of the work. Also, to be appreciated is the attention to the pre-existing artefacts which largely develop as an underground system.”

Gianandrea Gazzola, member of the jury panel

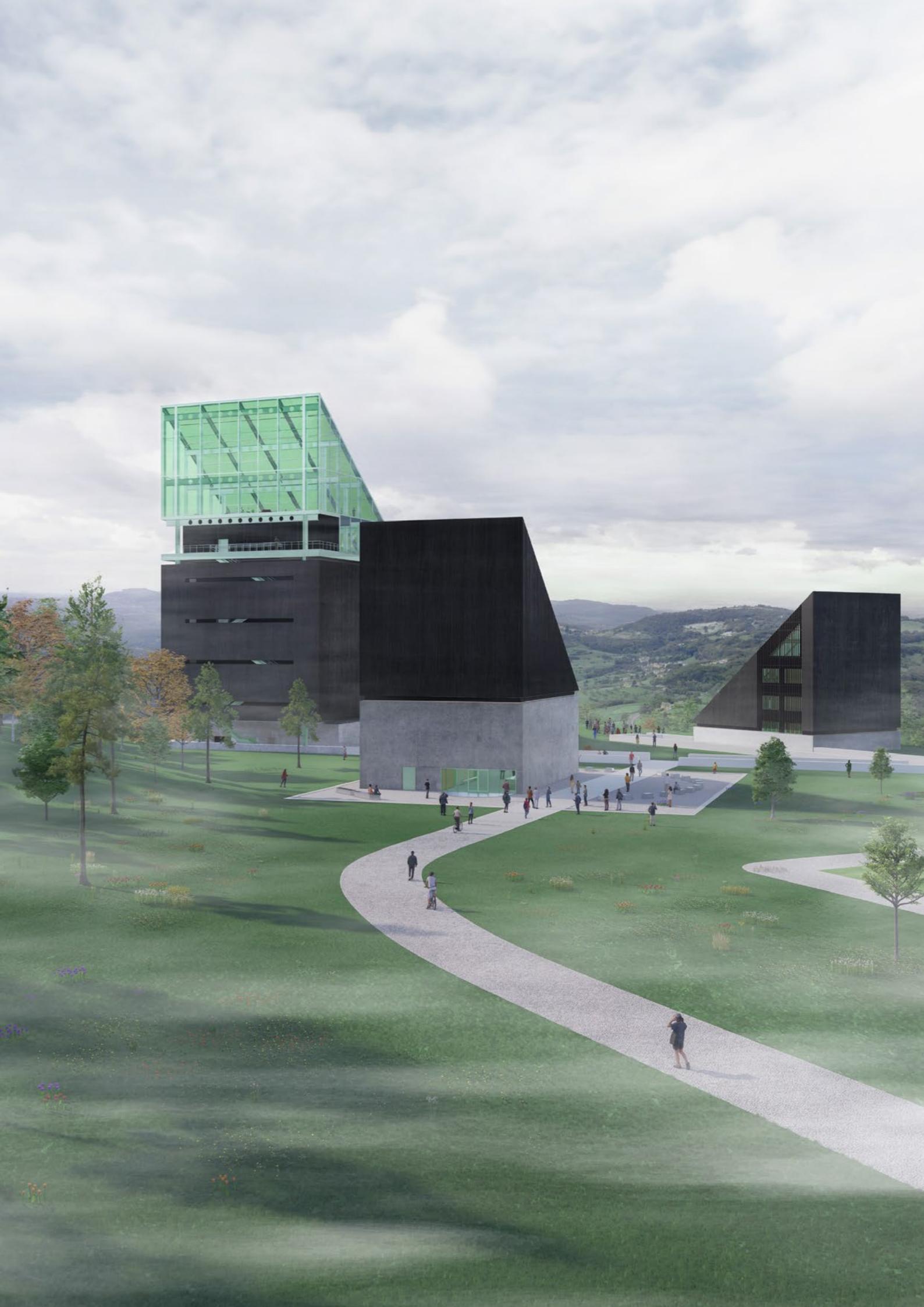


**2<sup>nd</sup> Prize + Gold  
Mention Manni  
Sipre - Manni Green  
Tech: “The power of  
steel”**

**Nguyen Quy  
Phu**

**Data Chapel**

Members: Nguyen Quy Phu  
Country: Vietnam

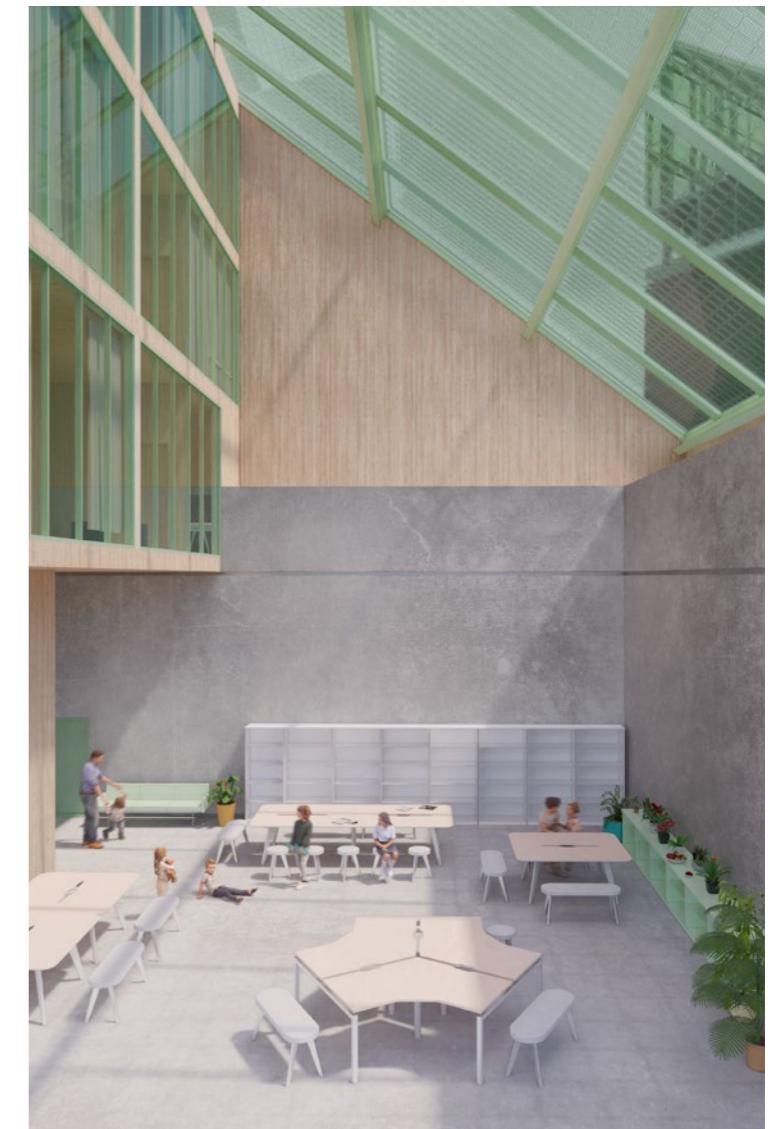


**I**l design della struttura si è ispirato alla fisionomia della montagna, che si riflette nell'aspetto estetico della costruzione. Per realizzare il progetto, ci si è ispirati alla luce solare e si è partiti dal recupero del bunker preesistente, utilizzato come fondamenta della nuova struttura. La costruzione esterna è stata realizzata con semplici planimetrie rettangolari, in modo da integrarsi perfettamente nel contesto.

I bunker esistenti sono utilizzati come fondamenta di nuove costruzioni. L'uso dell'acciaio per la struttura e dei pannelli fotovoltaici come elementi principali della nuova costruzione rappresentano una scelta attenta alla sostenibilità ambientale. I pannelli, posizionati sulle tre facciate esposte a sud, garantiscono la produzione di energia elettrica rinnovabile per soddisfare il fabbisogno energetico del Data Center e delle future attività della comunità.

L'energia sarebbe per lo più generata da pannelli fotovoltaici sulle tre facciate rivolte a sud a 37,5°. Per il Data Center, viene fornita un'ampia cavità di ventilazione della facciata in modo che l'attrezzatura tecnica possa essere facilmente raffreddata senza inficiare la vista e la sicurezza.

Utilizzando l'energia e il calore in eccesso generati dal Data Center, gli spazi pubblici e destinati ai servizi sono ben integrati nella nuova architettura, godendo di una vista mozzafiato verso nord ed un paesaggio montano verso sud, con villaggi che sembrano gemme sulla cima di una montagna.

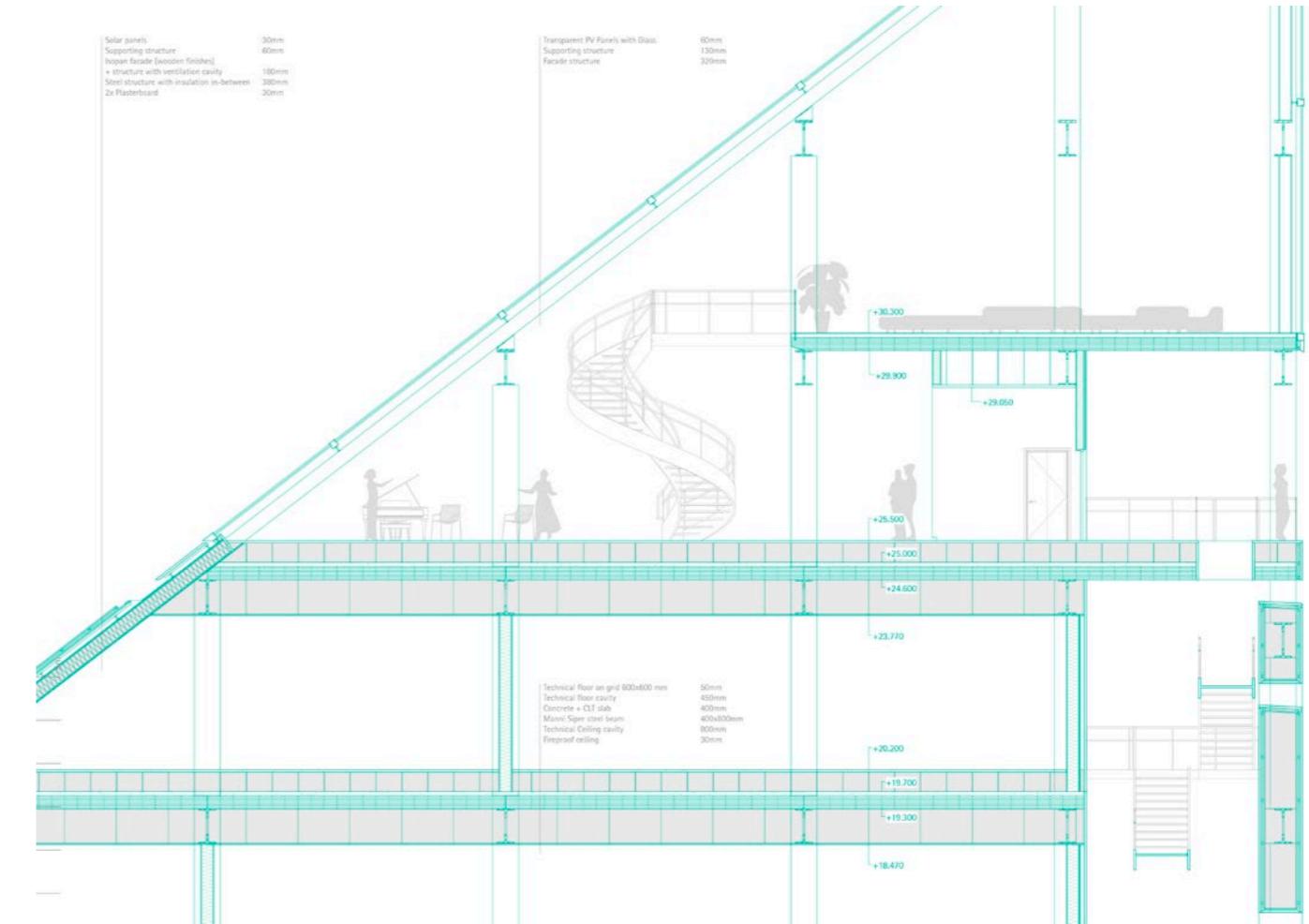
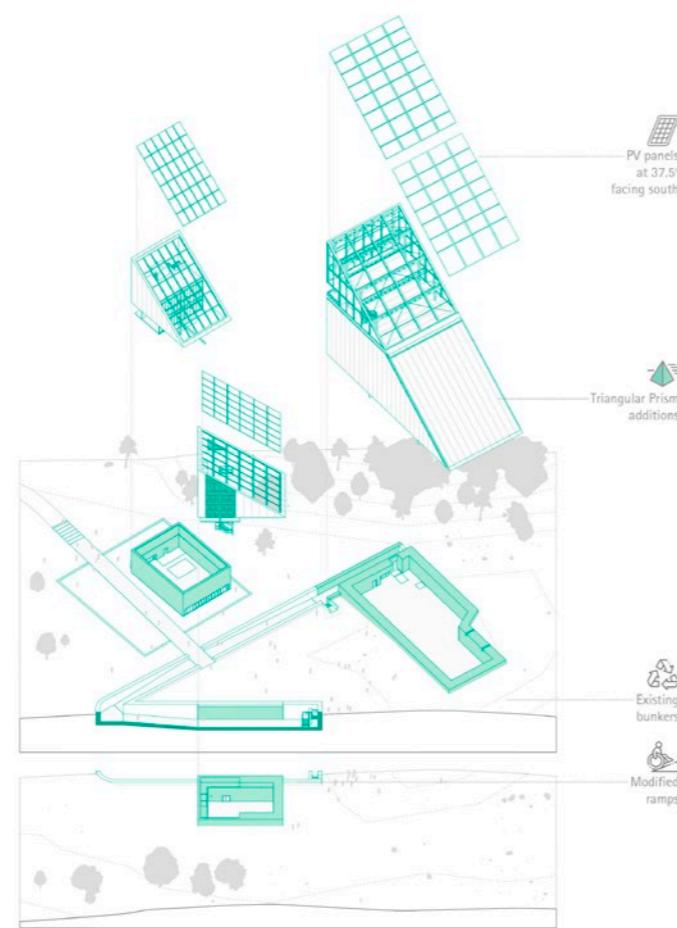
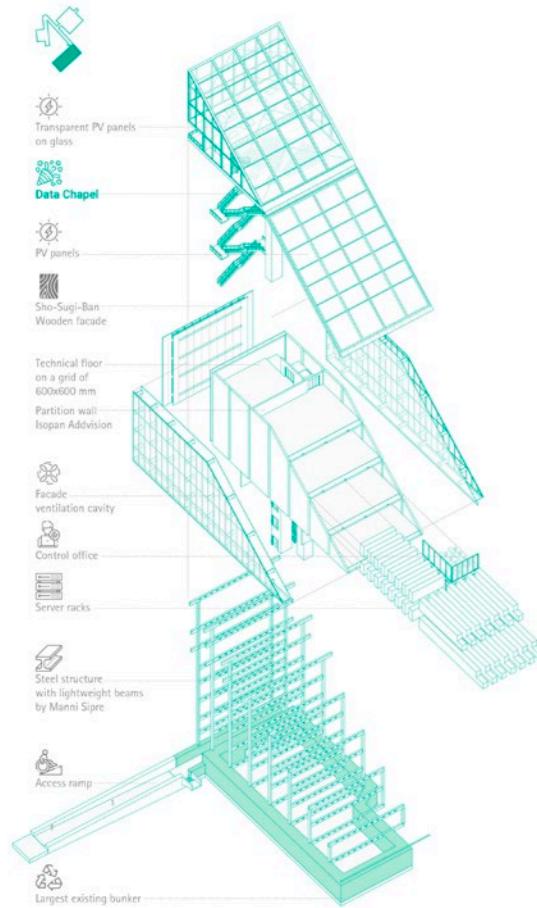


**T**he design of the structure was inspired by the physiognomy of the mountain, which is reflected in the aesthetic aspect of the building. To carry out the project, we started from the recovery of the pre-existing bunker, used as the foundations of the new structure. The external construction was built with simple rectangular plans, in order to integrate perfectly into the context.

Existing bunkers would be used as the foundation of new constructions. The use of steel for the structure and photovoltaic panels as the main elements of the new construction represent a choice that is attentive to environmental sustainability. The panels, positioned on the three facades facing south, guarantee the production of renewable electricity to meet the energy needs of the Data Center and future community activities.

The energy would be mostly generated by the PV Panels on the three 37.5° south-facing façades. For the Data Center, generous facade ventilation cavity is provided so the technical equipment could be easily cooled without disturbing views and security.

Utilizing the excessive energy and heat generated by the Data center, public and community spaces are well integrated in the new architecture. Public spaces share breath-taking views to the northern mountainscape and the southern villages. They appear like gems in a mountaintop.

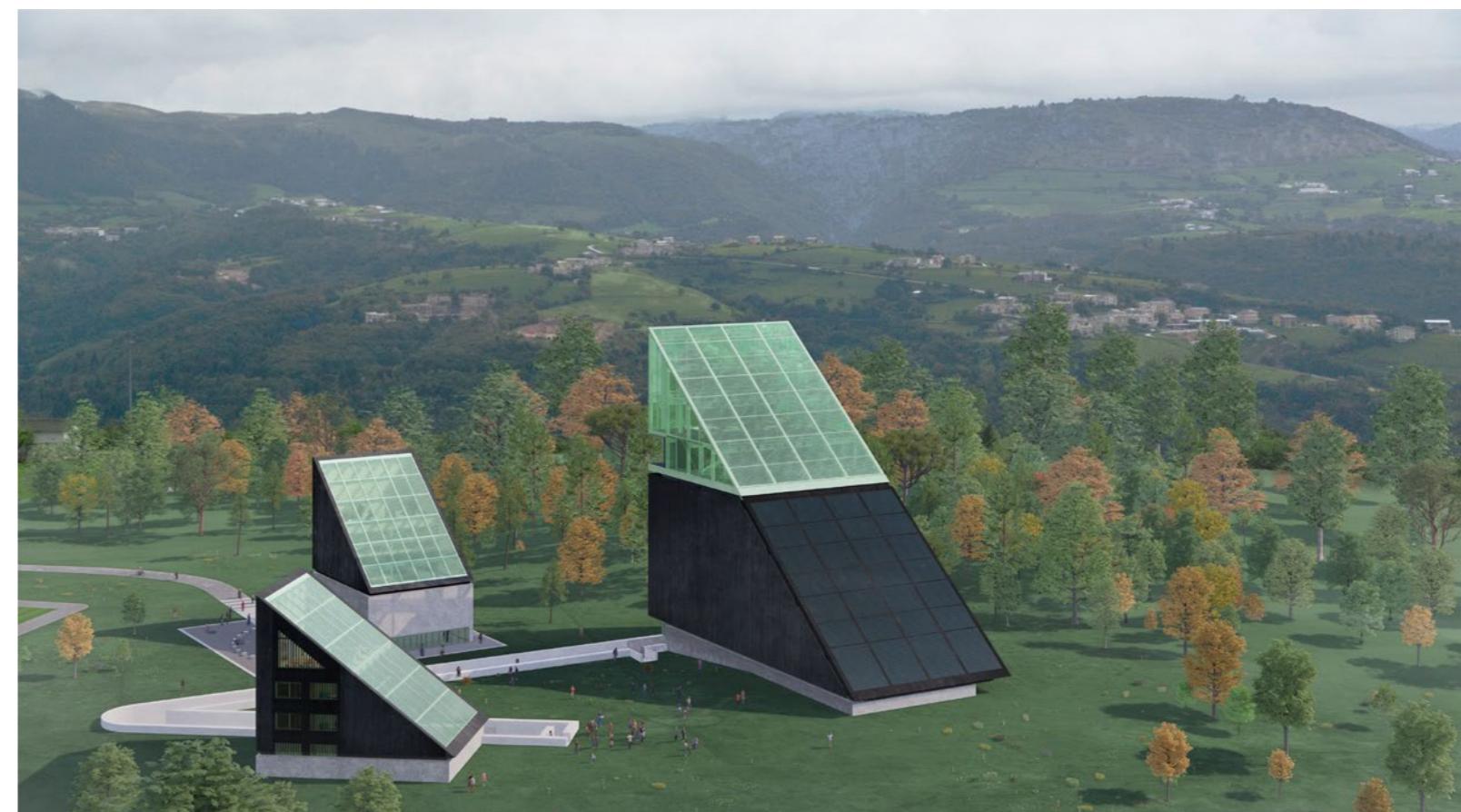


“Grazie ad una solida struttura in acciaio, svettano dalle fondamenta del sito esistente i tre volumi del Data Center che ricreano e ricordano il profilo delle montagne, la cui vista viene offerta a 360° grazie alla vetrata con cui si conclude la sommità del prisma.”

Massimo Fabbri, Membro del Consiglio e Direttore Tecnico e Industriale di Manni Group

“Thanks to a solid steel structure, the three volumes of the Data Center rise from the foundations of the existing site, recreating and recalling the profile of the mountains, the view of which is offered at 360° thanks to the glass which concludes the top of the prism.”

Massimo Fabbri, Board Member and Technical and Industrial Director of Manni Group

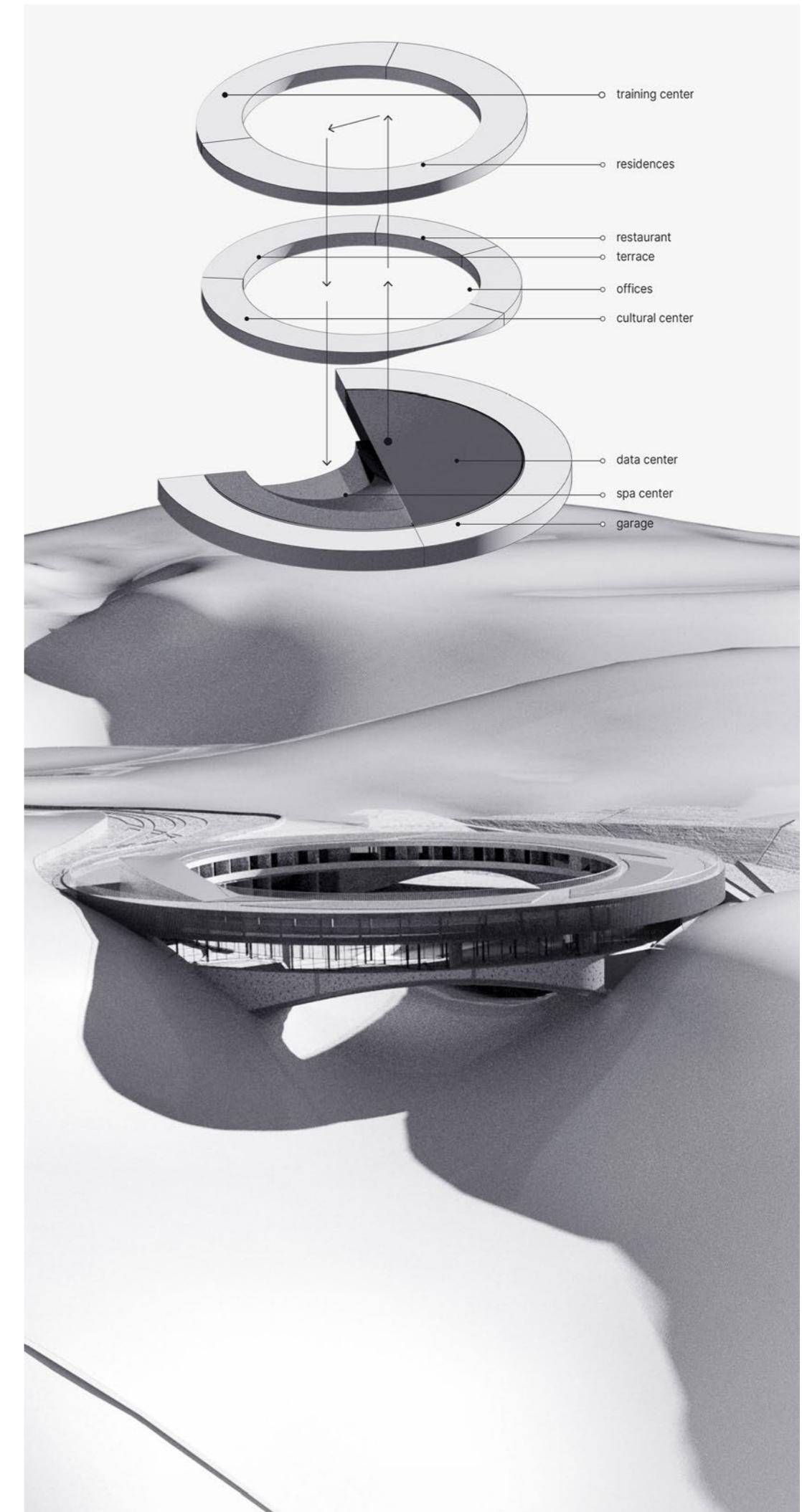
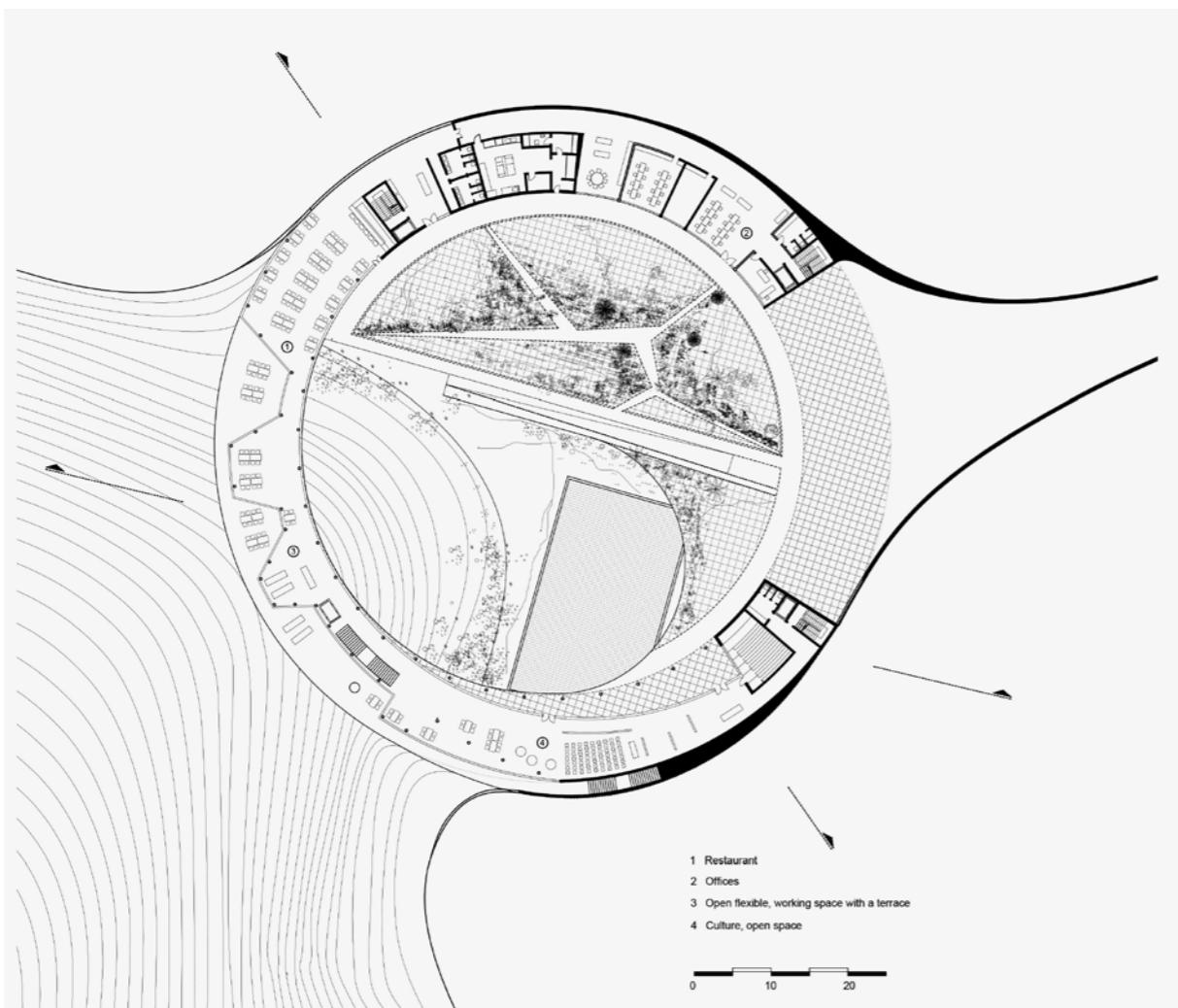


# 3<sup>rd</sup> Prize

## MLADE

# Tourbillon

Members: Sandra  
Draganic, Mila  
Nikolovski, Luka Grgic  
Country: Serbia







Il progetto "MLADE" di Sandra Dragovic, Milsa Nikolovski, Luka Gric, presenta un'idea di spazi aperti, attenzione agli agenti naturali quali l'irraggiamento solare e alla ventilazione naturale, che assieme alla copertura vegetale del tetto integra una tale forma della struttura all'ambiente circostante con attenzione al benessere della persona e alla condivisione di ampi spazi interni."

Samuele Tommasi - Comune Sant'Anna d'Alfaedo, membro della giuria

The "MLADE" project by Sandra Dragovic, Milsa Nikolovski, Luka Gric, presents an idea of open spaces, attention to natural agents such as solar radiation and natural ventilation, which together with the green roof cover integrates such a form of the structure to the surrounding environment with attention to the well-being of the person and the sharing of large internal spaces."

Samuele Tommasi - Municipality of Sant'Anna d'Alfaedo, member of the jury panel

**C**on l'introduzione del data center nel paesaggio esistente delle Prealpi Venete, si ottiene la giustapposizione tra la natura ermetica, solida e stabile del data center che rappresenta i valori contemporanei e il paesaggio fluttuante di vasti campi aperti di montagna - sede di istanze tradizionali vernacolari della vita.

Il progetto è orientato alla definizione di una configurazione che sia in grado di mobilitare queste qualità contrastanti, sia nel rapporto tra contenuto nuovo ed esistente, sia nelle specifiche caratteristiche topografiche e geografiche.

Mira ad abbracciare tutte le qualità trovate in un movimento 'vorticoso', creando un perimetro stabile intorno all'emozionante interscambio di contenuti diversi.

In relazione a ciò, la forma architettonica predominante prescelta è quella del toro che si trova tra le colline, l'altopiano e l'abisso, circoscrivendo i descritti spostamenti del paesaggio e orchestrando il movimento e il programma del nuovo fulcro, allo stesso tempo esteticamente raffigurando la qualità predominante del nuovo punto di riferimento - l'unione trasformativa rispettiva delle qualità intrinseche presenti nei contesti spaziali e programmatici.

Con l'obiettivo di unire tutte queste peculiarità in un moto vorticoso, un perimetro stabile è stato creato intorno all'emozionante interscambio di contenuti diversi. A concretizzare questa interpretazione, si è fatto ampio uso del sistema GreenROOF per integrare la struttura con il paesaggio circostante e sono stati impiegati i pannelli della gamma Isopan ADDMIRA per rivestire la facciata dell'edificio.

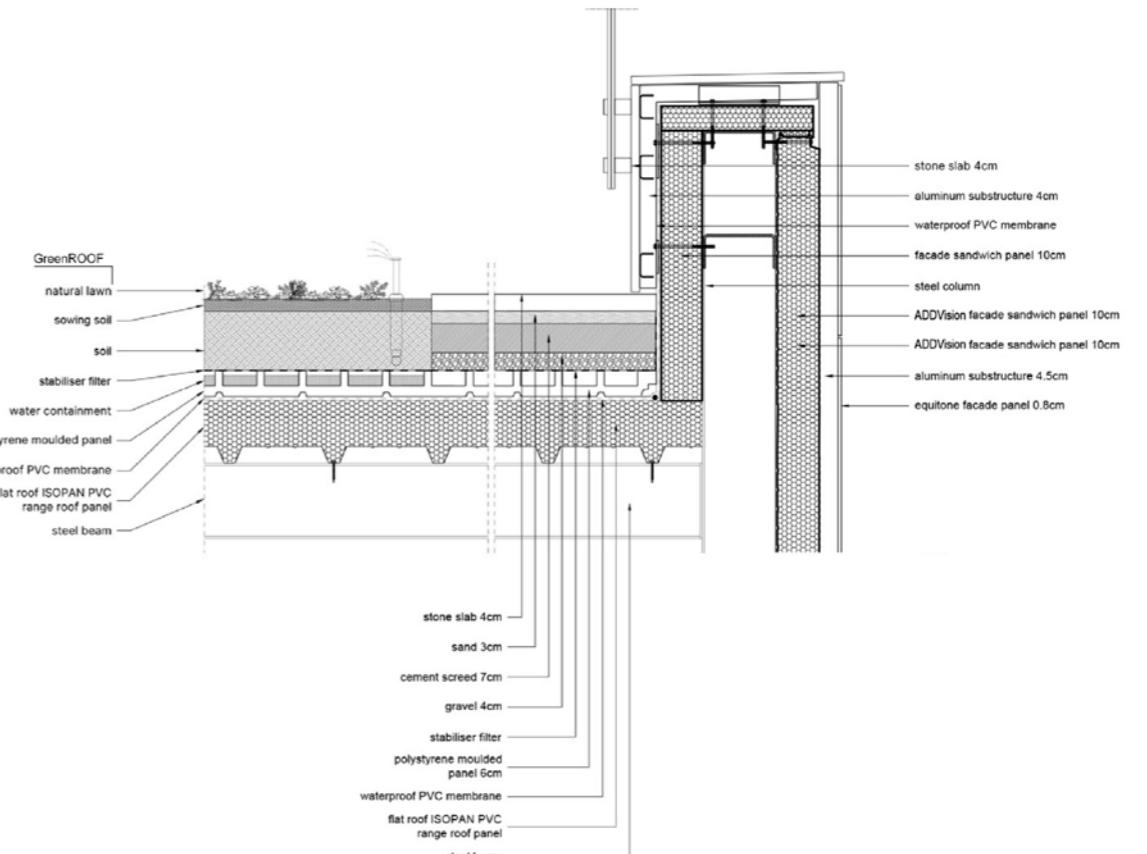
**W**ith the introduction of the data center to the existing landscape of Venetian Prealps, the juxtaposition is achieved between the hermetic, solid, and stable nature of the data center representing contemporary values and the fluctuant landscape of vast open mountain fields - home to vernacular traditional instances of life.

The project is directed toward defining a configuration that is able to mobilize these contrasting qualities, both in the relationship of the new and existing content and in the specific topographic and geographical characteristics.

It aims to embrace all found qualities in a 'whirling' motion, making a stable perimeter around the exciting interchange of diverse contents.

In relation to that, the chosen predominant architectural form is that of the torus lying in-between hills, plateau, and the abyss, circumscribing the described shifts in the landscape and orchestrating the movement and program of the new hub, at the same time aesthetically representing the predominant quality of the new landmark - the transformative union respective of intrinsic qualities found in spatial and programmatic contexts.

With the aim of uniting all these peculiarities in a whirling motion, a stable perimeter has been created around the exciting interchange of different contents. To materialize this interpretation, extensive use was made of the GreenROOF system to integrate the structure with the surrounding landscape and panels from the Isopan ADDMIRA range were used to clad the facade of the building.



# Gold Mention

## Isopan:

### “Ventilated Facade”

# mk\_js

## Post & Lintel



Members: Myong Kun Oh,  
Ji Soo Kim  
Country: South Korea



“L'utilizzo sapiente del sistema per facciate ADDMIRA di Isopan in questo progetto conferisce un alto valore estetico all'edificio. L'effetto sfumato della finitura dalla colorazione neutra e naturale dona eleganza e leggerezza alla struttura, integrandosi armoniosamente all'interno del contesto montano.”

Rocco Traini, Technical and R&D Manager di Isopan.

**I**l progetto premiato con questa Gold Mention è stato sviluppato con la soluzione per facciate ad alto valore estetico e prestazionale ADDMIRA di Isopan, applicando tecnologie e finiture innovative per creare un effetto dissolvenza della parete. La facciata così ideata è stata determinante nella selezione per questa Gold Mention proprio per il suo ruolo fondamentale all'interno del progetto.

Il complesso è stato realizzato integrando agli spazi esistenti nuove volumetrie. La struttura originale composta da pali e architravi (Post e Lintel in inglese, da cui prende il nome il progetto) è stata trasformata in una struttura portante in acciaio, funzionale alla creazione di uno spazio che collega le due aree principali dell'edificio, in armonia con la presenza di altre tecnologie come il sistema per coperture verdi GreenROOF di Isopan.

Grazie ad un sistema di intelligenza artificiale, viene mantenuto uno stato di omeostasi all'interno dell'edificio come se fosse un organismo vivente in grado di autoregolarsi: il calore generato dal funzionamento del data center viene sfruttato e messo in circolazione per scaldare l'aria e l'acqua dell'edificio, oltre a creare e impiegare energia nelle altre aree, compresa la serra progettata per essere una vertical farm, i cui prodotti sono resi disponibili agli avventori della struttura.

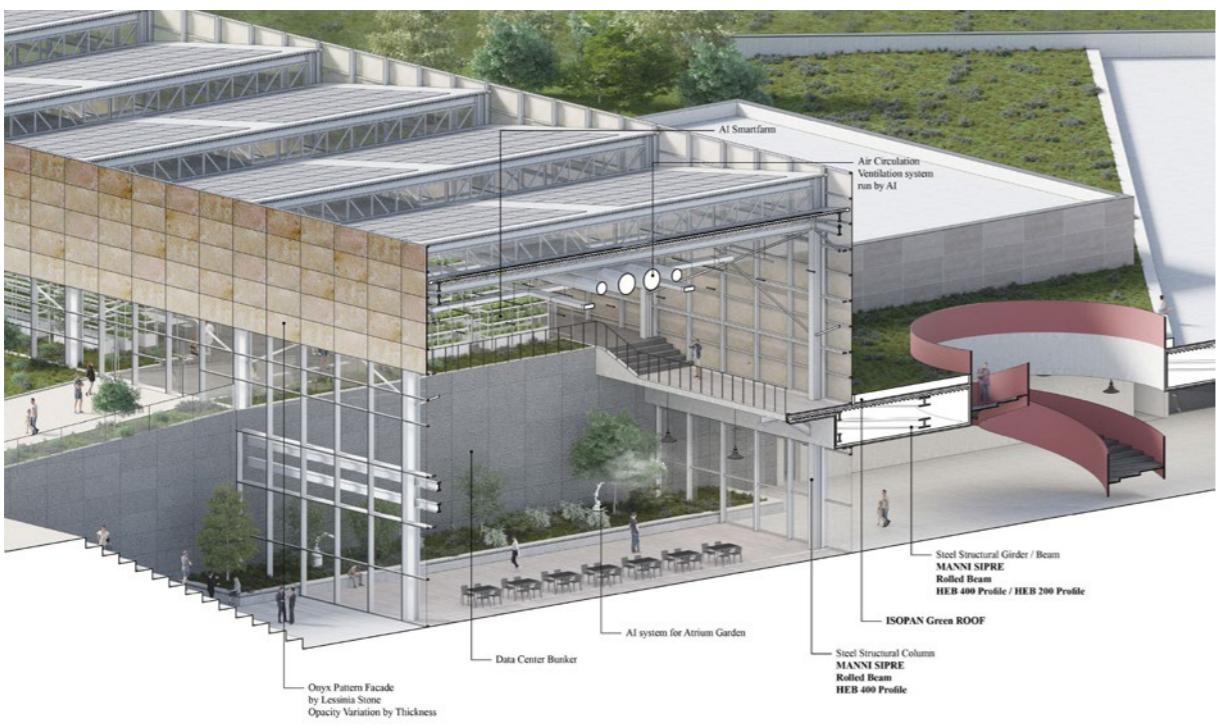
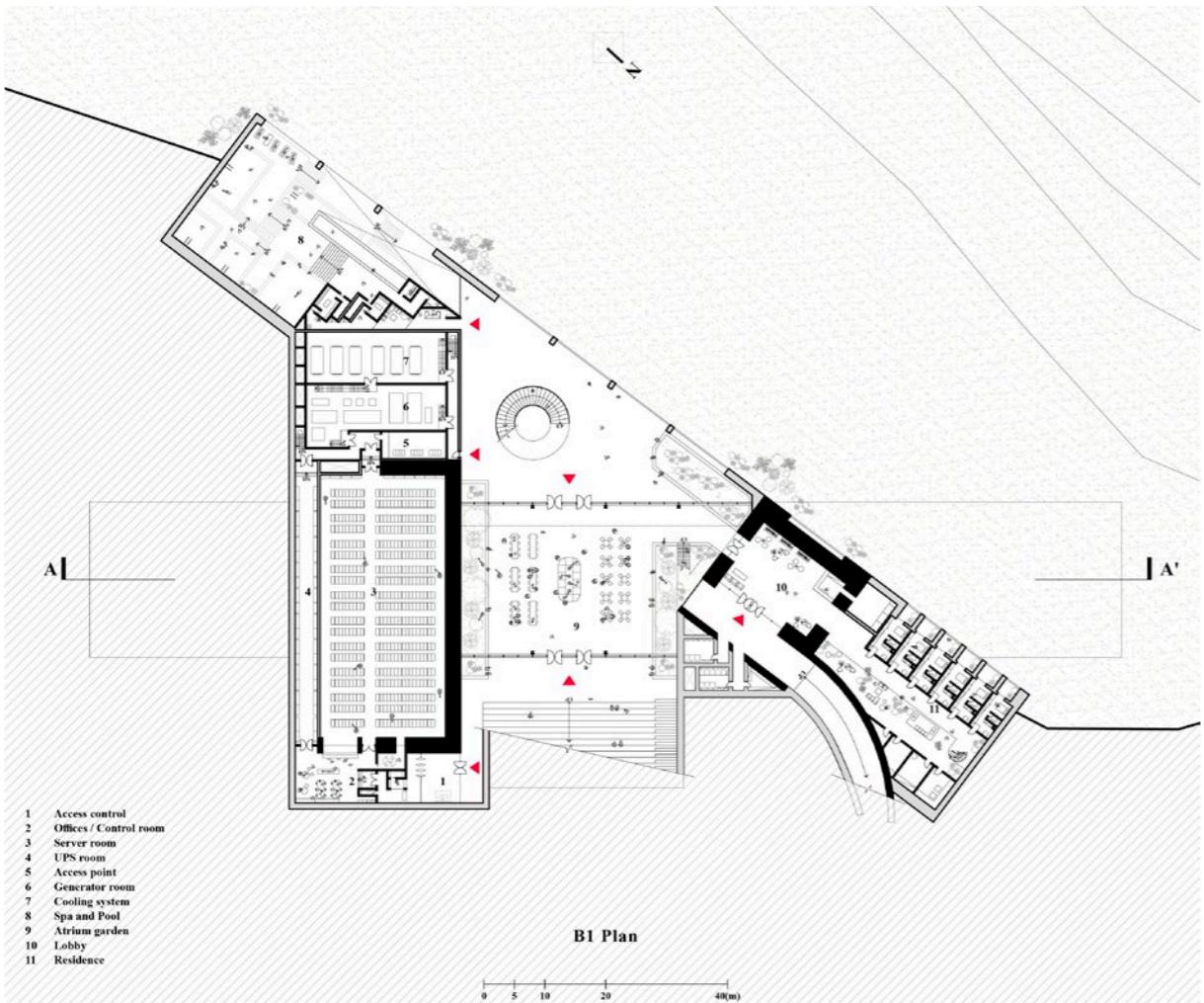
**T**he project awarded with this Gold Mention was developed with the Isopan solution for facades with high aesthetic and performance value, ADDMIRA, applying innovative technologies and finishes to create a fading effect of the wall. The facade thus conceived was decisive in the selection for this Gold Mention precisely because of its fundamental role within the project.

The complex was built by integrating new volumes into the existing spaces. The original structure made up of posts and lintels was transformed into a steel load-bearing structure, functional for the creation of a space that connects the two main areas of the building, in harmony with the presence of other technologies such as Isopan's GreenROOF system.

Thanks to an AI system, a state of homeostasis is maintained inside the building as if it were a living organism capable of self-regulation: the heat generated by the operation of the data center is exploited and circulated to heat the air and water throughout the building, and to create and use energy in other areas, including the greenhouse designed to be a vertical farm, whose products are made available to the patrons of the facility.

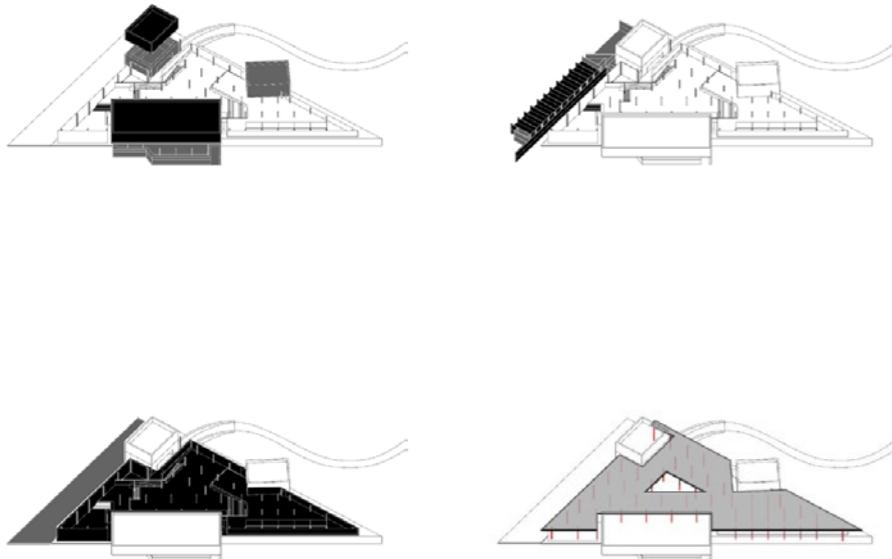
“The skilful use of the ADDMIRA facade system by Isopan in this project gives a high aesthetic value to the building. The nuanced effect of the finish with a neutral and natural color gives elegance and lightness to the structure, integrating harmoniously within the mountain context.”

Rocco Traini, Isopan Technical and R&D Manager



# Gold Mention Isopan: “Flat Roof Solutions”

## Clelo TRI-MATRIX



Members: Zeng Nanlan,  
Jiayu Fan  
Country: China

I l progetto si è aggiudicato la menzione d'onore gold per l'utilizzo del sistema Flat Roof di Isopan, soluzione altamente performante per le coperture piane.

Un bunker militare e un bunker antinucleare sono stati abbandonati tra le splendide montagne della Lessinia. Attraverso una forma triangolare con tensione ed equilibrio dinamico, il design risponde alla memoria delle precedenti battaglie militari costruendo un simbolo astratto per un data center all'avanguardia. Il design si avvale della tecnologia a risparmio energetico di Manni Group. I pannelli solari del tetto piano triangolare massimizzano la fornitura di energia rinnovabile dell'edificio e contribuiscono a preservare l'ambiente.

L'integrazione di vetrate e di un'apertura superiore tra il tetto e il cielo, rafforzano il legame tra ciò che viene creato dall'uomo all'interno e la natura all'esterno dell'edificio, amplificando la sensazione di armonia con il paesaggio.

The project was awarded a gold mention for the use of the highly performing Isopan solution Flat Roof.

A military bunker and an anti-nuclear bunker were left behind between the stunning mountains of Lessinia. Through a triangle shape with tension and dynamic balance, the design responds to the memory of previous military battles while constructing an abstract symbol for a cutting-edge data centre. The design makes use of green energy-saving technology from the Manni group. The triangular flat roof's solar panels maximize the building's supply of renewable energy and contribute to environmental protection.

The integration of glass windows and an upper opening between the roof and the sky strengthen the link between what is created by man inside and nature outside the building, amplifying the feeling of harmony with the surrounding landscape.



“Questo edificio dal gusto squisitamente moderno e minimale, dalle forme pulite e lineari, culmina con una copertura piana che non ostruisce la vista sulle sconfinate colline dell’ambiente montano che lo circonda. L’uso del sistema Flat Roof di Isopan è stata una scelta che, oltre ad essere funzionale dal punto di vista architettonico, ha permesso l’installazione di pannelli fotovoltaici per generare energia e contribuire al fabbisogno dello stabile.”

Luigi Guerrini, Direttore tecnico e logistico di Isopan

“This building with an exquisitely modern and minimal taste, with clean and linear shapes, culminates with a flat roof that does not obstruct the view of the boundless hills of the mountain environment that surrounds it. The use of the Isopan Flat Roof system was a choice which, in addition to being functional from an architectural point of view, allowed the installation of photovoltaic panels to generate energy and contribute to the needs of the building.”

Luigi Guerrini, Isopan Technical and Logistic Manager



# Gold Mention BASF

## HNL\_KNU

### Data contour

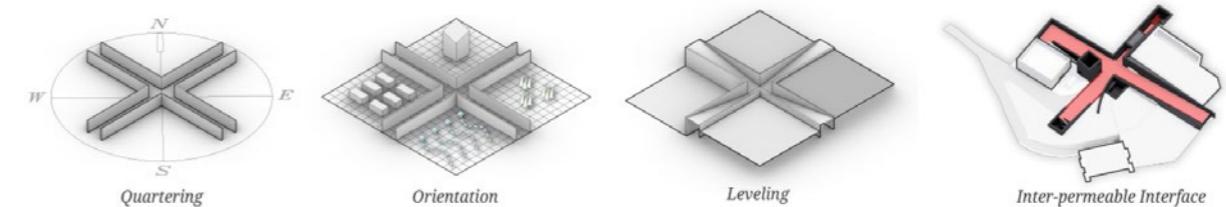
"BASF crea chimica per un futuro sostenibile. Attraverso la ricerca e l'innovazione unisce al successo economico la tutela dell'ambiente e la responsabilità sociale, con l'obiettivo di soddisfare le esigenze attuali e future della società. Il mondo sta affrontando grandi sfide e abbiamo bisogno di soluzioni che rendano possibile una crescita sostenibile. I giovani sono portatori di innovazione e, insieme a BASF, creano valore scrivendo ogni giorno come saranno le città del domani. Il progetto del Data Contour è l'esempio di come passato, presente e futuro possano coesistere. Una sintesi che sa raccontare la preesistenza storica militare e la moderna destinazione futura, pur mantenendo l'integrazione con il territorio circostante."

Lorenzo Bottinelli, Amministratore Delegato e Vicepresidente BASF Italia

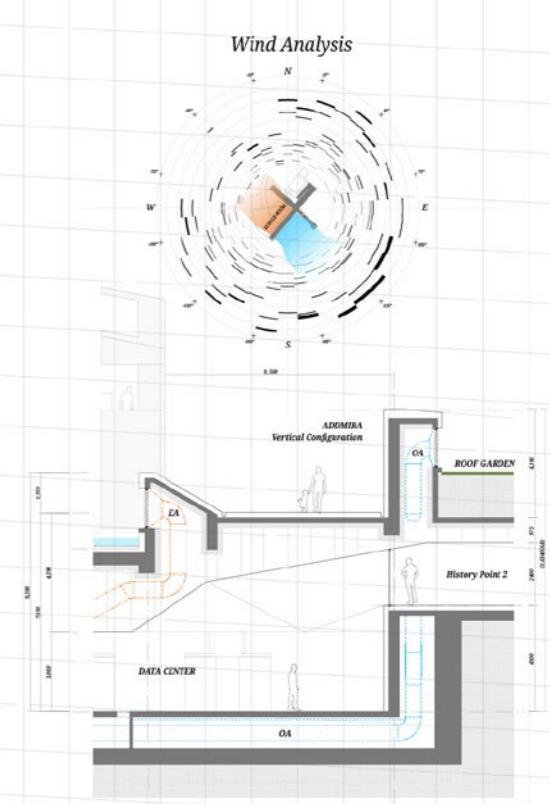
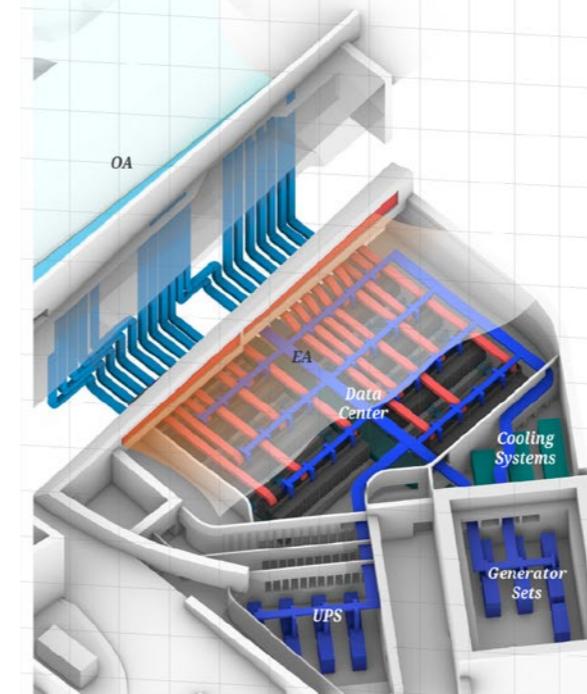
"BASF creates chemistry for a sustainable future. Through research and innovation, it combines economic success with environmental protection and social responsibility, with the aim of meeting the current and future needs of society. The world is facing great challenges and we need solutions that make sustainable growth possible. Young people are the bearers of innovation and, together with BASF, create value by writing every day what the cities of tomorrow will be like. The Data Contour project is an example of how past, present and future can coexist. A synthesis that knows how to tell the historical military pre-existence and the modern future destination, while maintaining integration with the surrounding area."

Lorenzo Bottinelli, Chief Executive Officer and Vice President of BASF Italy

Members: Chang Min Lee,  
Yong Gyun Lee, Jiho Kim  
Country: South Korea



**Technical Detail**  
Detail description - MEP Coordination



**P**er questo progetto è stato riconosciuto l'impiego della soluzione del pannello Isofrozen di Isopan, utilizzato per garantire ambienti a temperatura controllata.

Lavorando con attenzione al riutilizzo delle strutture esistenti, è stata mantenuta l'estetica del progetto preesistente e l'integrazione minimale con le nuove aree tecniche del data center. Lo studio dell'evoluzione delle forme della gestione dei dati nella storia ha ispirato la forma del progetto.

Fin dalla storia dell'umanità, infatti, si sono stabiliti punti di contatto tra il micro e il macro-mondo per orientarsi e riconoscere la propria posizione sulla terra. Il progetto propone una forma architettonica simbolica per permeare tra lo spazio locale e non locale sulla base dell'archeologia dei dati. Il data center non necessita di un sito fisico specifico a causa della non località dei dati, può essere costruito ovunque garantendo la capacità dello spazio del server principale e può produrre spontaneamente un design ottimale che indaga le coordinate ambientali, storiche e culturali esistenti nel sito. In considerazione dello spazio vuoto tra gli edifici esistenti, la posizione dei server principali è definita secondo il sistema di ventilazione e raffreddamento dell'aria mediante l'analisi della rosa dei venti.

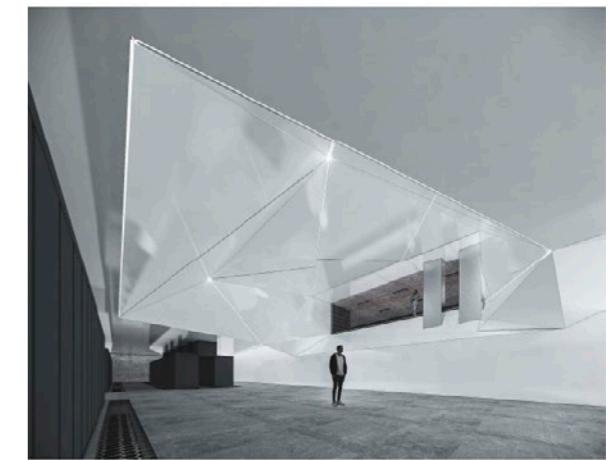
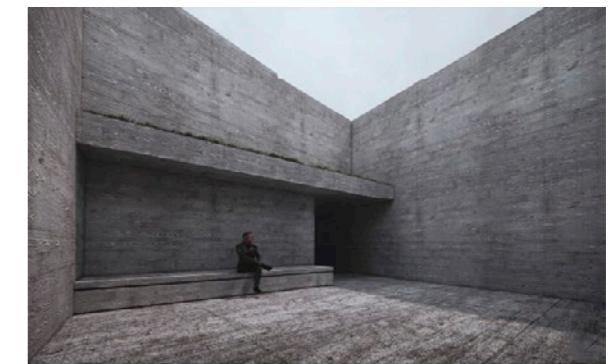
Per migliorare l'impatto ambientale, sono state implementate ulteriori tecnologie all'avanguardia, come il sistema GreenROOF per le coperture e ADDMIRA per la facciata.

**F**or this project, the use of the Isopan Isofrozen panel solution was recognized, used to guarantee controlled temperature environments.

By working carefully on the reuse of existing structures, the aesthetics of the pre-existing project and minimal integration with the new technical areas of the data center were maintained. The study of the evolution of data management forms throughout history inspired the form of the project.

As a matter of fact, since humankind history, contact points were made between micro and macro world to orient and recognize oneself location on the earth. The project proposes an architectural form having symbolic shape to inter-permeate between local and non-local space based on data archaeology. Data centre doesn't need specific physical site because of the non-locality of data, it can be constructed anywhere if securing the capacity of main server space and can produce spontaneously optimum design investigating environmental, historical, cultural coordinates existing onsite. In consideration of void space between existing buildings, the location of main servers is set in the view of air ventilation and cooling system by wind-rose analysis.

To improve the environmental impact, further cutting-edge technologies have been implemented, such as the GreenROOF system for the roofs and ADDMIRA for the facade.



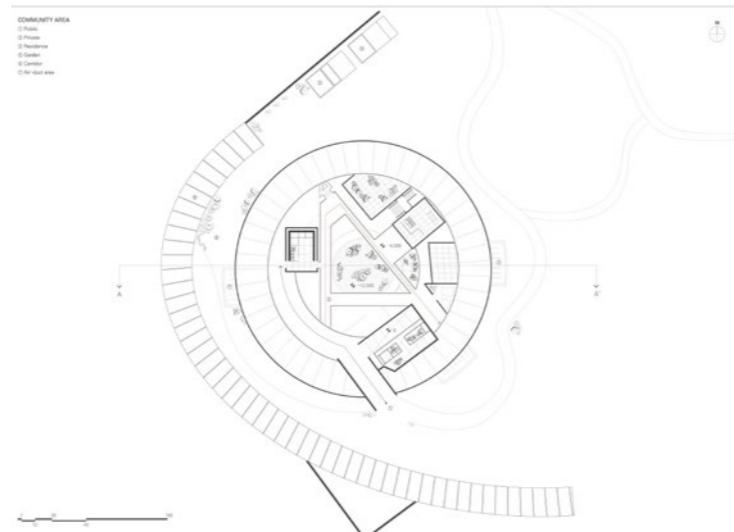
# Honorable Mentions

Review

# STUDIO MDR

## Data centre with seed bank

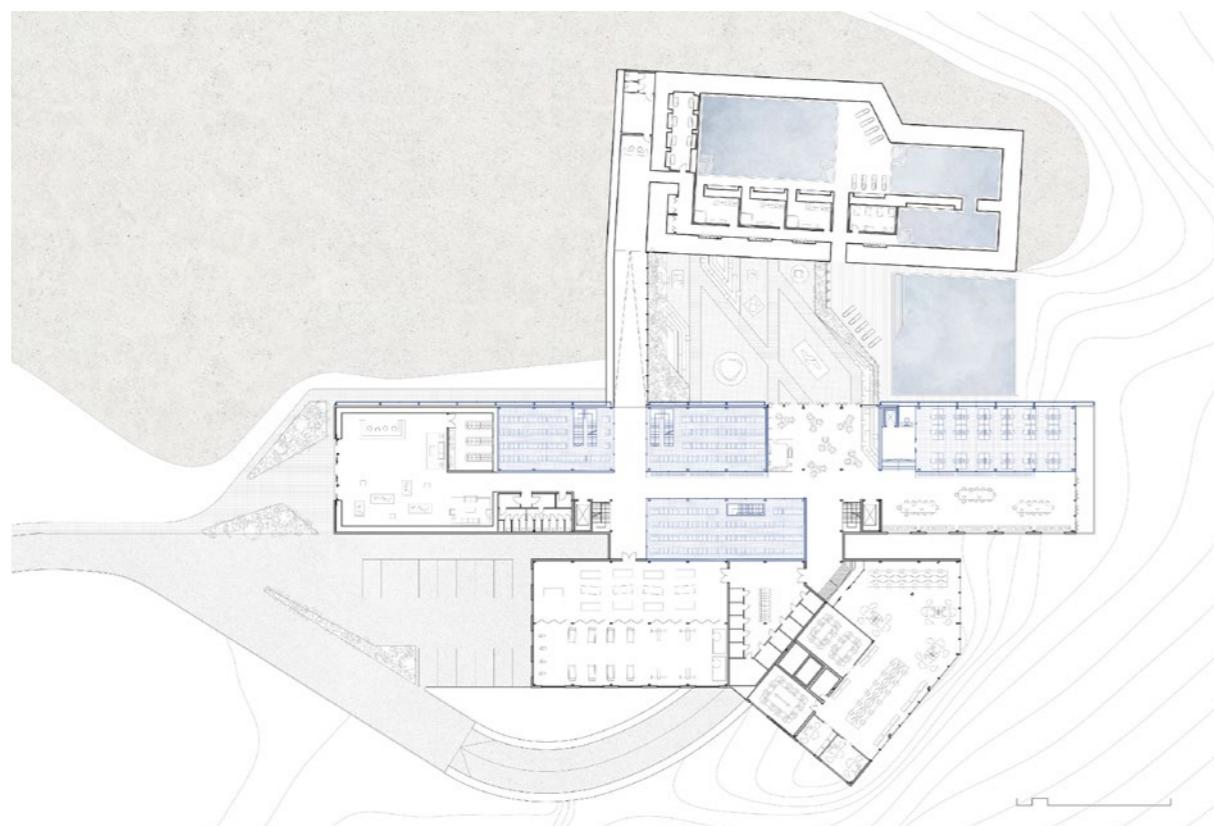
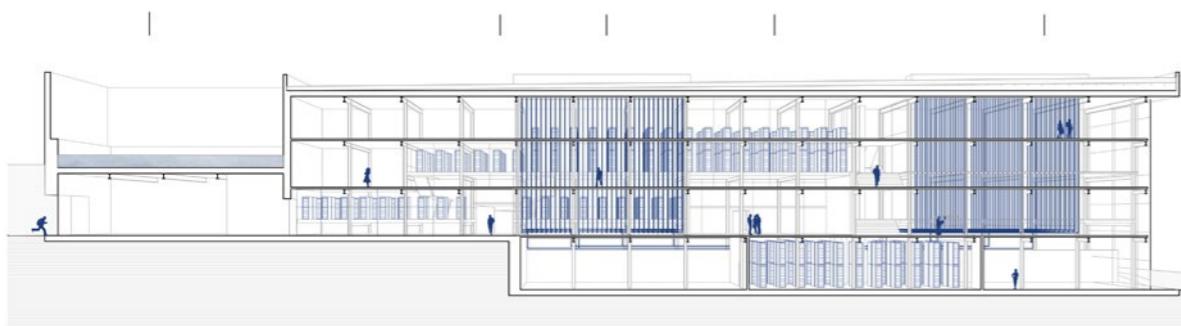
Members: Hyeong Seok  
Kim, Ji In Yoo, Solah  
Yoo, Yunsub Lim  
Country: South Korea



# MMJ\_

## Intercontinental

### The New Library of the Digital Age



Members: Michał Deja,  
Lok Yiu Janice Chu,  
Mahan Mashayekh  
Country: Denmark

In the digital age, data centers have replaced traditional libraries as repositories. They share similarities but, they offer more than just storage space. They serve as communal spaces where people come together to share and exchange knowledge. Libraries also visually represent knowledge through their book collections and exhibitions. Conversely, the design of data centers is

often machine-oriented, mono-functional, exclusive, and inaccessible to the general public.

Drawing an analogy between libraries and data centers prompts us to consider whether data centers can be envisioned as the libraries of the digital age. Can data centers be more than mono-programmed black boxes, and instead become gathering hubs, destinations,

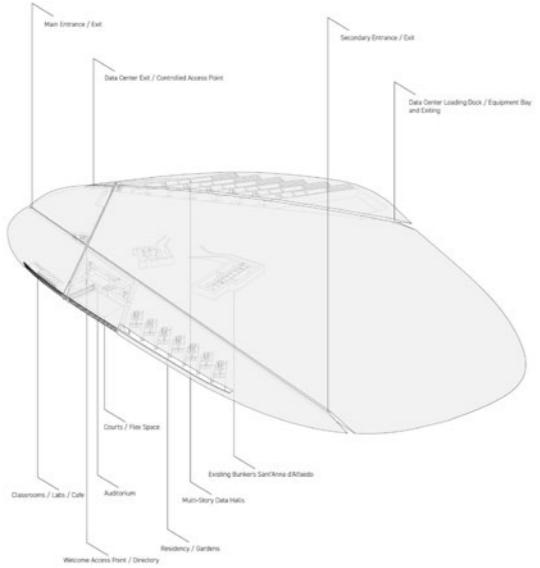
and incubators of future knowledge and education? Can data centers embody the values of the digital age, leveraging data to build sustainable communities and architecture?

To achieve this vision, it is necessary to rethink the architecture of data centers to make them more accessible and visible to the public, thereby creating a new identity for them.

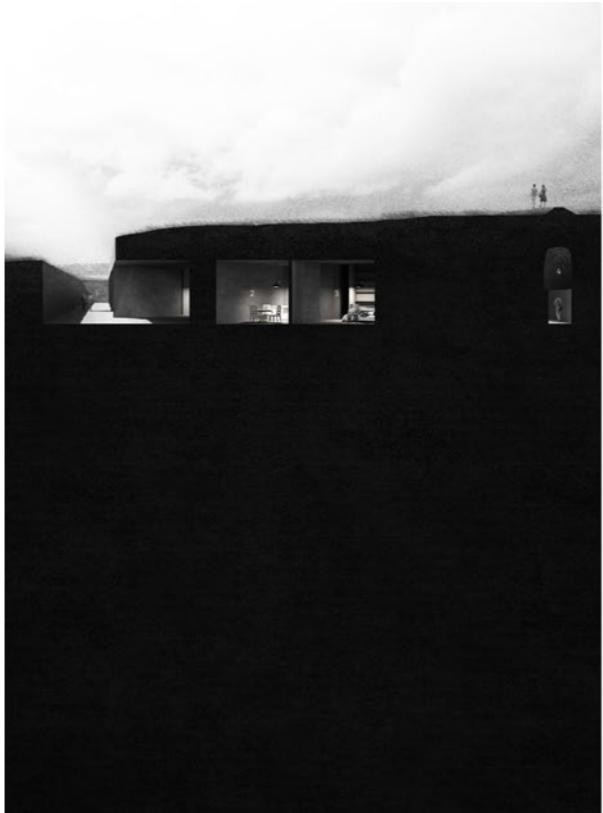


# Viewers Like You

## Lessinia regional data station

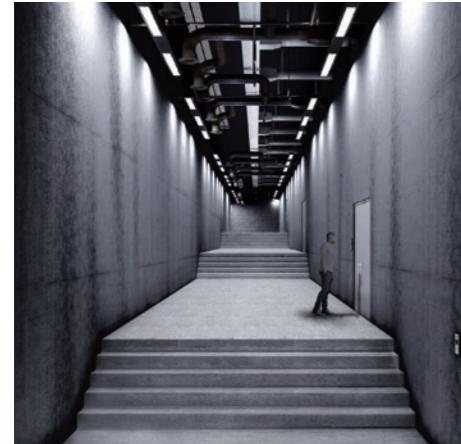


Members: Dairon Riesgo,  
China Carr  
Country: United States



# KRDRE

Members: Semin Kim,  
Yeong Eun Jeong, Yeong  
Ug Lee  
Country: South Korea



We thought of the plateau, bunkers, and sustainability of the data centers in a combination. Existing buildings and new interventions make buildings fluid and a real energy cycle takes place in them. The digital world as realistic as the material world was directly experienced in space and used the material traces in it as a landmark of the city.

It took the purpose of the three bunkers located on the vast plateau of Santana di Alpedo and considered what role to take over at this point. Bunkers, formerly used to protect people, were used for functional and practical protection of data centers that act largely as deep material roots in the digital world.

The bunker underground, the plateau above

it, and the community above it are natural arrangements by the vast plateau, but they contain various data center functions. The separation of underground and ground copper lines created by separate segments took into account the security of the data center, and the bunker placed on the plateau was used as a space for overlapping underground data centers and ground communities. Overlapping from the underground to the ground and from the ground to the underground are made. It also serves to transfer vast amounts of thermal energy from the data center to community facilities (overlapping from underground to ground) and cools vast amounts of heat from the data center as a channel that utilizes strong winds from the Santa Di Alpedo area.



# ANDO Q

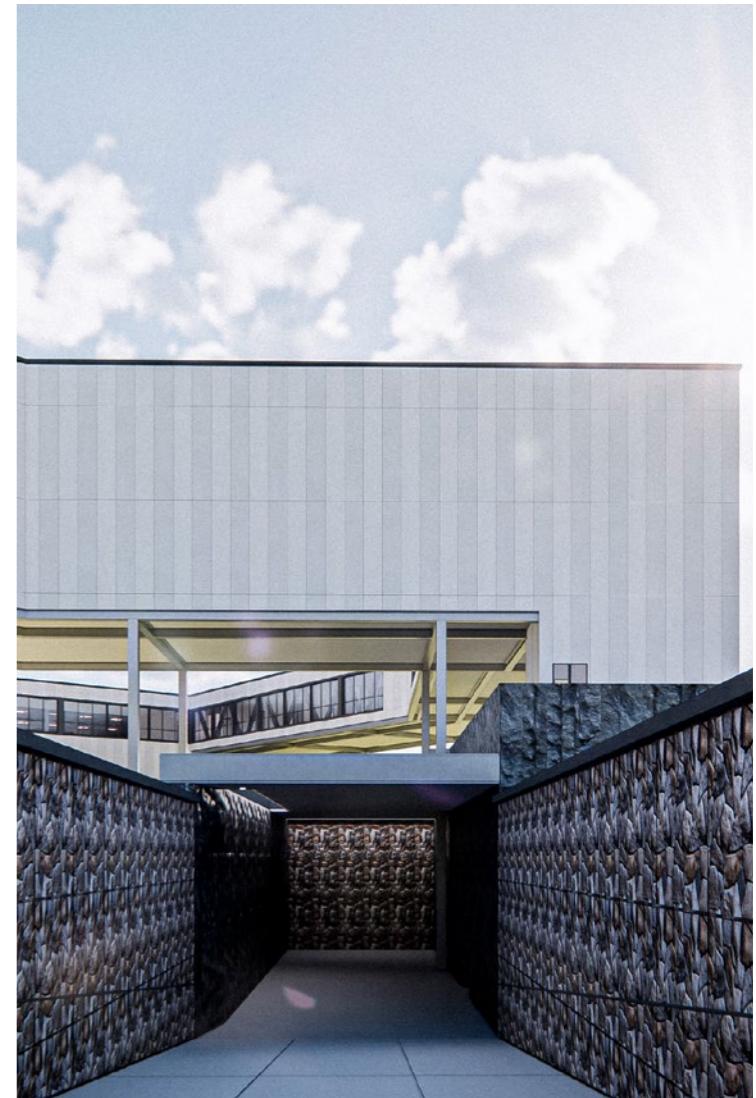
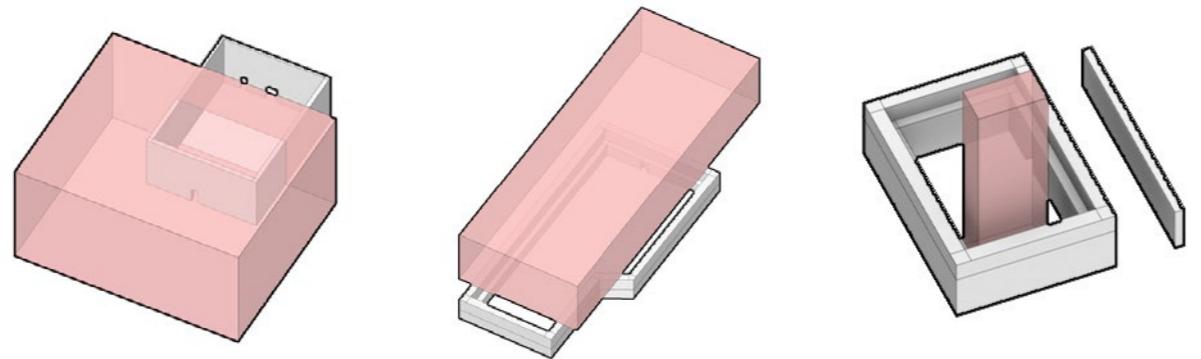
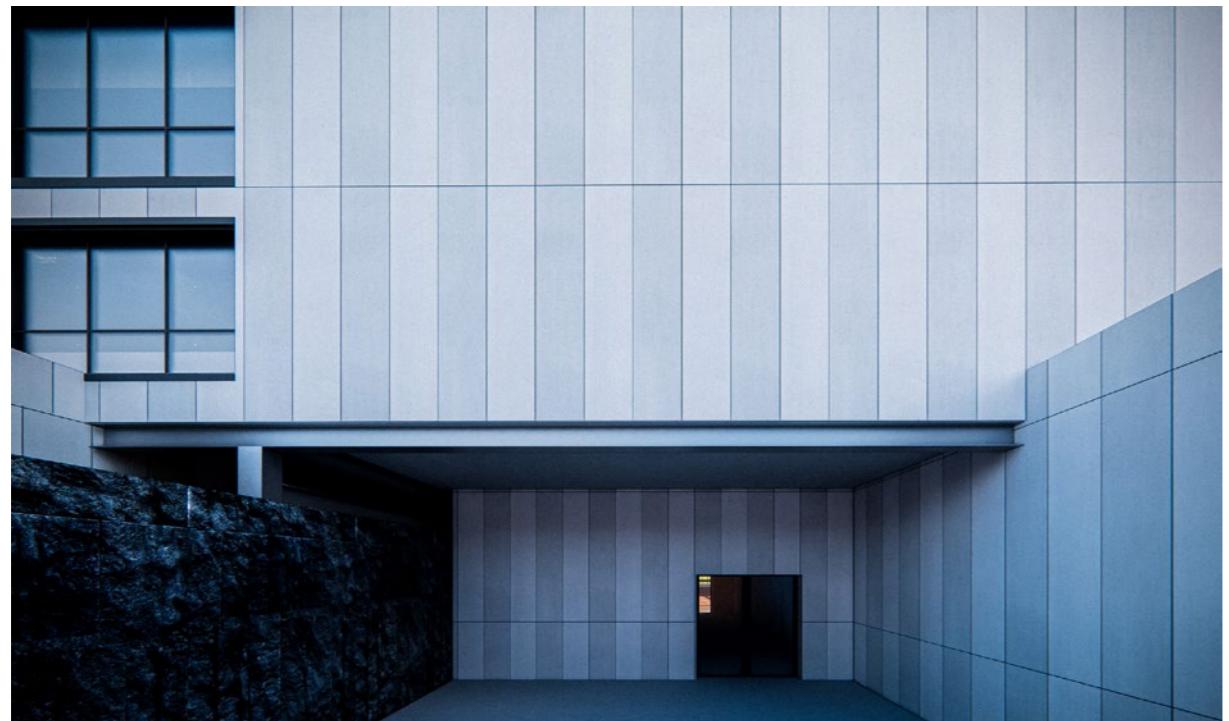
The scheme aims to design a data centre on a former military site, forming a landscape building to accommodate the operation of a computer room, civic sporting activities and public learning and research. The main body of the new building will be based on the old architectural remains of the site and will be shaped by the interpretation of different spaces to create a complex of buildings with a unified order, function

and movement. The scheme aims to design a data centre on a former military site, forming a landscape building to accommodate the operation of a computer room, civic sporting activities and public learning and research. The main body of the new building will be based on the old architectural remains of the site and will be shaped by the interpretation of different spaces to create a complex of buildings with a

unified order, function and movement. The scheme aims to design a data centre on a former military site, forming a landscape building to accommodate the operation of a computer room, civic sporting activities and public learning and research. The main body of the new building will be based on the old architectural remains of the site and will be shaped by the interpretation of different spaces to create a complex of buildings with a

of buildings with a unified order, function and movement. There is a famous poem in ancient China, "The wind blows the grass and the cattle and sheep appear low", which is a tribute to a beautiful scene of harmony between man and nature. The newly built data center is an engine, a generator of technology, and a lookout of the scenery. It will re-establish a friendly dialogue with nature with a new attitude.

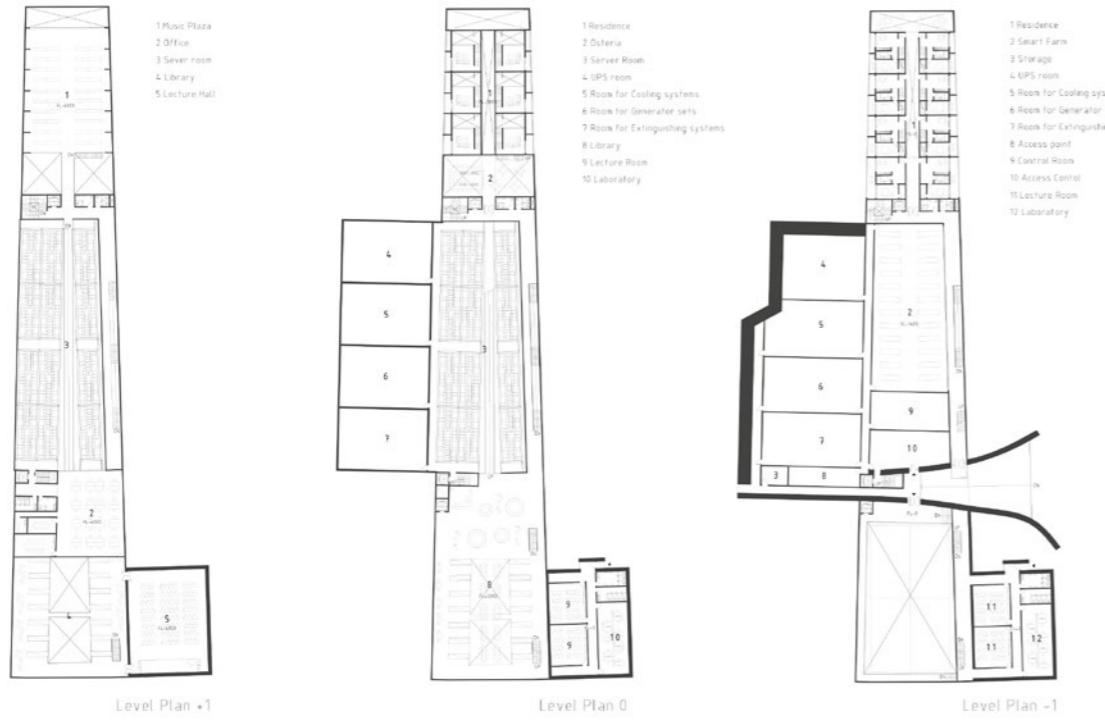
Members: Qian Zheng  
Country: China



# Fun-ghi

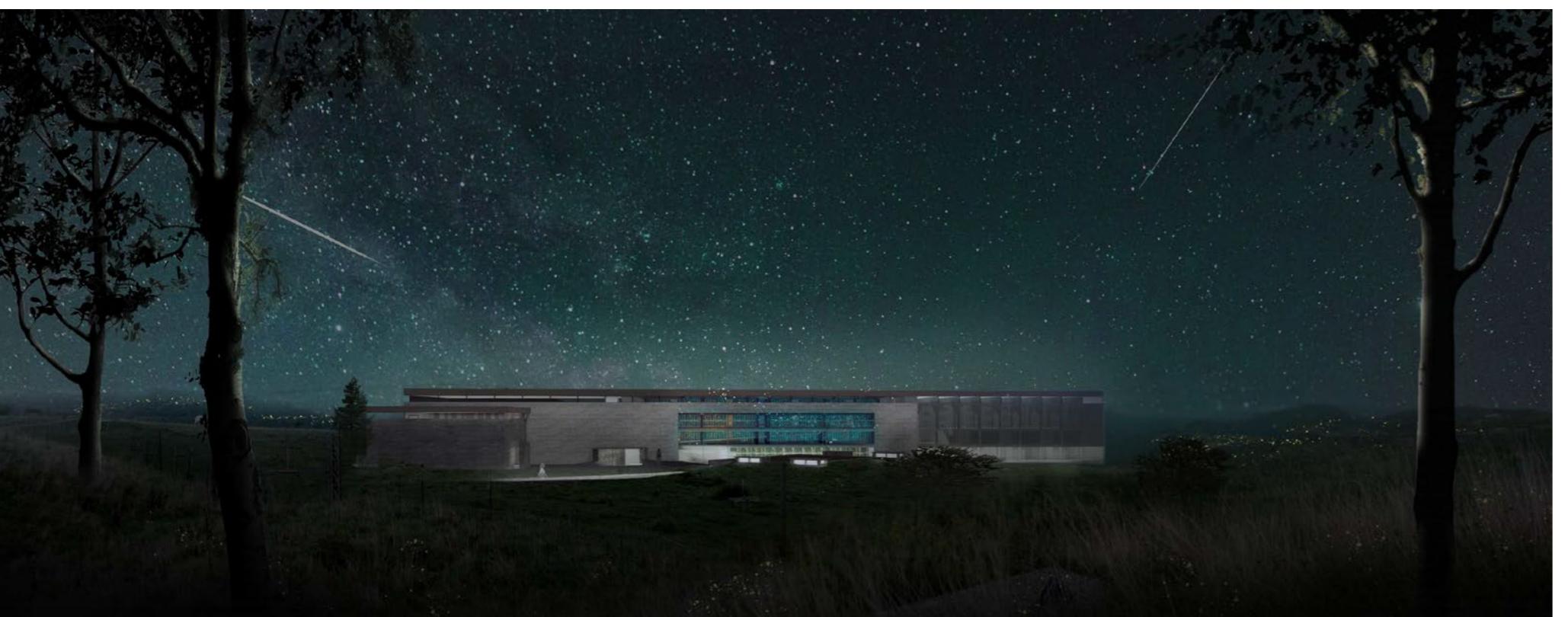
## [in]consio

Members: Beomho Lee,  
Haerin Yang, Jaewon  
Song  
Country: South Korea



We see the data center as an object of unconsciousness that we are not aware of, but certainly it mediates our daily life. Following [In]consio, we provide a physical experience of exploring the unconsciousness. The journey of the spaces along the circulation will provide an extension of the unconscious about THE unfamiliar Infrastructure. Data centers come in heterogeneous uses and shapes. Therefore, we propose the experience of creating a psychological knot for the data center within the individual's unconscious by projecting the primeval image of the night sky into the server room. The night sky seen by ancient Romans thousands of years ago and the night sky seen by World War II soldiers from Sant'Anna d'Alfaedo share the same Archetype. And it now illuminates us in the present. In the light of the servers shimmering in the dark, look out of the frame at the starry sky of the breathtaking natural park of Lessinia. It evokes our collective unconscious about the stars and leads to the illusion of reversal. The military bunker puts a new light on

the new data center. The server room is revealed in the same architectural language as the existing military structures. A new mass settles along the Venetian Prealps and embraces it towards the village. The server room at the center endowed with infinite scalability through precasted modular structure. As the volume of server rooms grows vertically, it is expected to be a landmark for the city that gets bigger with it. [In]consio has two loops created by the server room. The first is the Energy loop. The heat generated in the server room passes through the Residence-Smart Farm-Gymnasium and utilizes the generated heat giving the building sustainability. The second is DATA loop. The program leading to School-Library-Servers-Plaza allows data to be applied, stored, and expanded in one building. The loop of circulation is an extension of the loop we already enjoy through data. We envision Data Center going beyond the role of infrastructure through the expansion of the boundaries. You'll now see the chain of data that was too big to see.



# Loft224

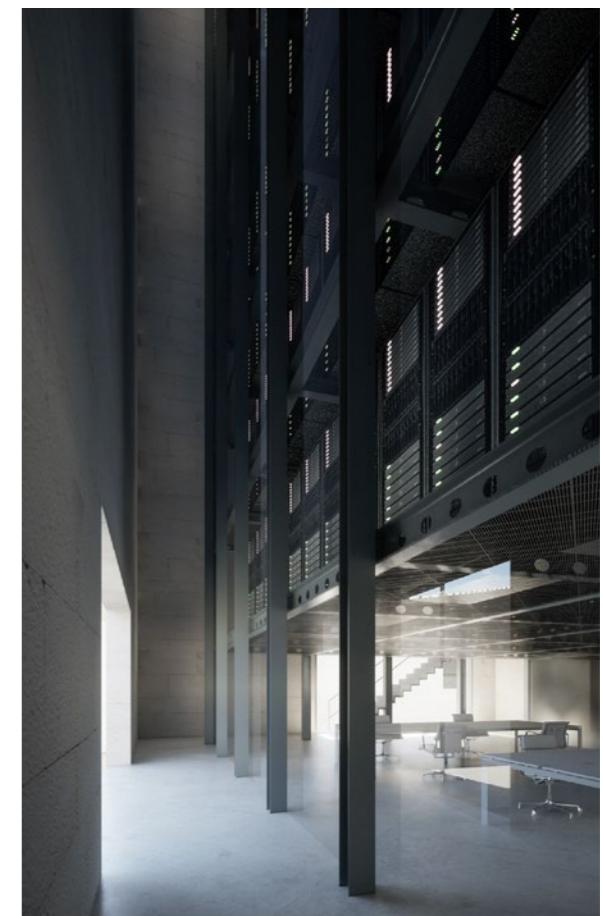
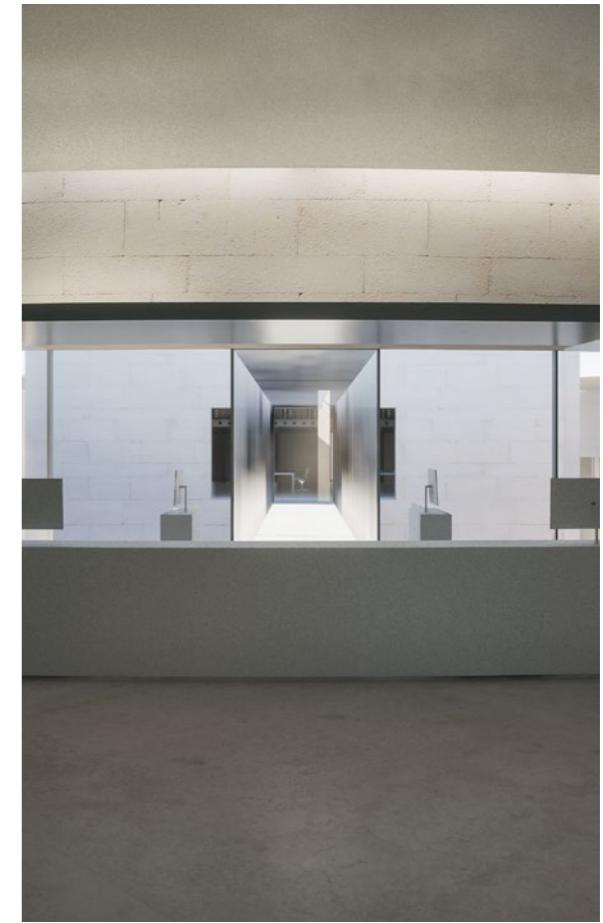
## The Stone in the Water

Data centers have become an integral part of modern society, supporting everything from online shopping and social media to cloud computing and big data analysis. As our reliance on technology continues to grow, the demand for data storage and processing also increases. This has made data centers increasingly critical to the functioning of our economy and society. However, despite their importance, data centers are often hidden from view, located in remote locations or housed within nondescript buildings. "The Stone in the Water" data center design aims to change that by creating an iconic building that represents the power and importance of our digital infrastructure. The design is centered

around a monumental server tower made from local stone, which serves as a landmark character in the Venetian Alps. The tower is designed to be visible throughout the complex, with every wall, room, and walkway oriented towards it and the water basin that surrounds it. The tower's prominence reflects the central role that servers play in the functioning of the data center. In addition to its iconic design, "The Stone in the Water" data center is also built with sustainability in mind. The design incorporates a closed-loop system where waste heat generated by the servers is repurposed to heat apartments and public spaces within the complex. This system helps to reduce the energy consumption of the

data center and make it more environmentally friendly. The design also incorporates existing bunkers into the complex, connecting them in a harmonious and functional way with the surrounding ring. The bunkers protect vital components such as cooling pumps and backup generators and serve as the site of the large assembly hall. The other functions of the complex, such as the apartments, coffee shop, restaurant, spa, and foyer, are arranged in a way that offers unique views of the green gardens, the water, and the monumental server tower. The design of "The Stone in the Water" data center also takes into consideration the need for security. The entrances are designed for specific separation

Members: Gregor Hilpert,  
Marvin Hugo  
Country: Germany



# Calima arquitectos

The project's main goal is to create a new model of data center without damaging the natural space that it's placed in, trying to give a new purpose and reuse these abandoned architectures remaining in the site and its surroundings. That's why a new volume is introduced in between the existing underground bunkers filling in this unused space, connecting them and creating a

new way of perceiving this site, generating a new landscape and putting into value the existing views. Researching about the existing buildings and understanding their meaning we generated new architecture based on three different concepts: underground architecture, emerging architecture and cantilever architecture. The underground bunkers and the space in between

is used for the data center itself, using the existing buildings as the gears of the project so all the spaces are created gravitating towards them. The emerging building, being the only one that is not underground, it's used to create a landmark that can be visible from all over the place, activating and giving identity to the site.

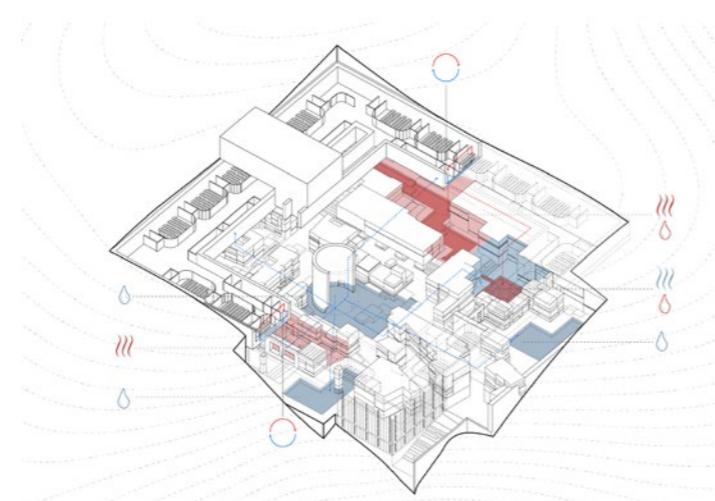
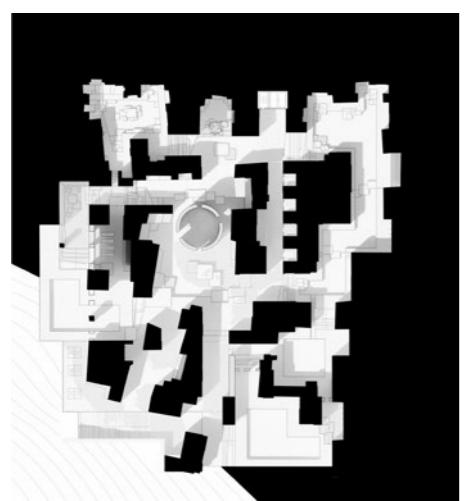
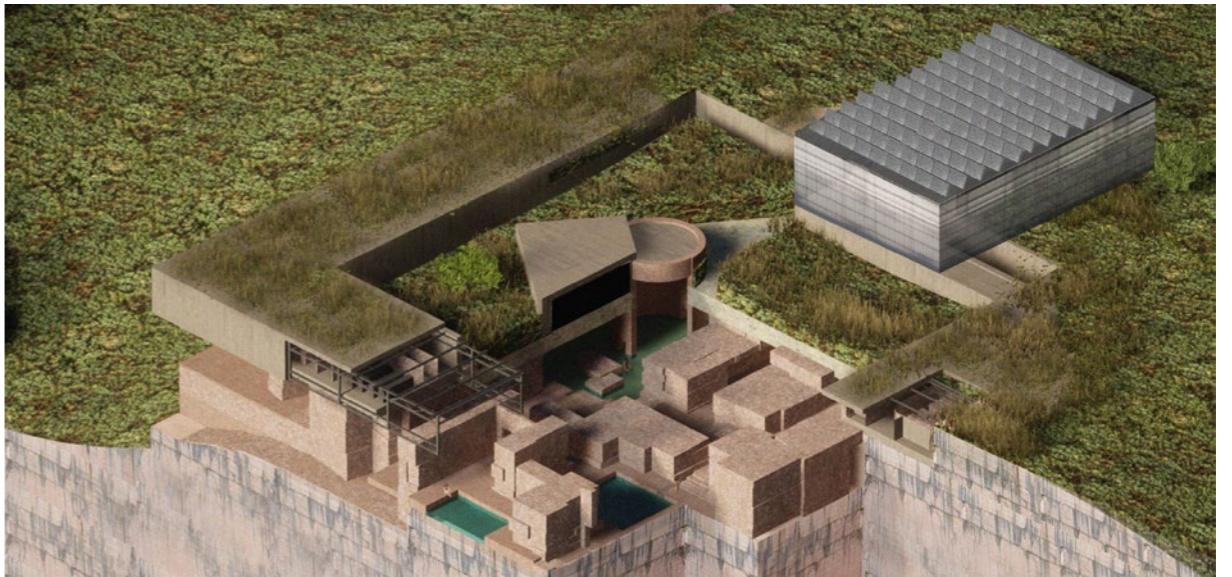
Members: Patricia Castro Lorenzo, Berta Caballero Valido, Carolina Pérez Lorenzo, Raúl Marrero Pérez  
Country: Spain



# Sosnierz Ziemiecka

## Mining data

Members: Ewa Ziemięcka,  
Zofia Sosnierz  
Country: Poland



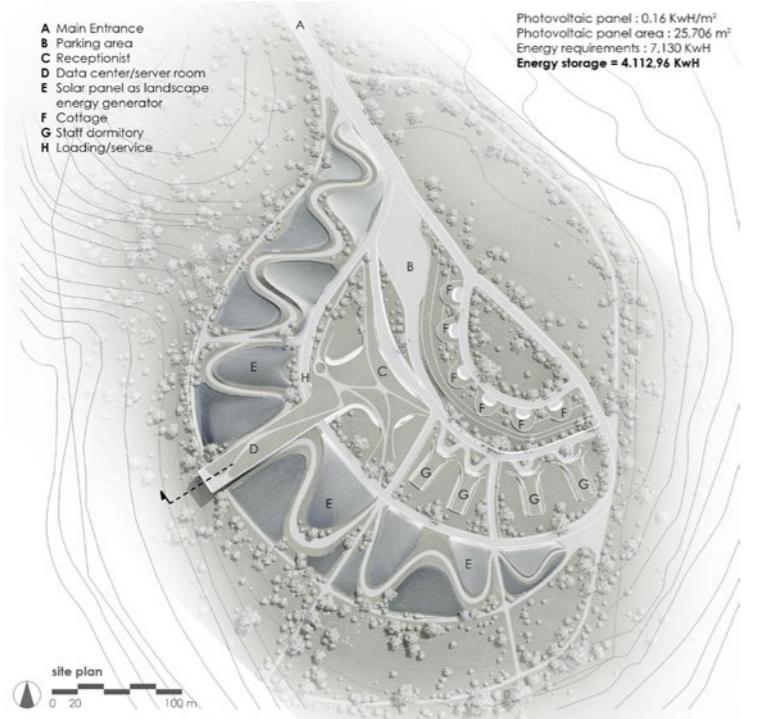
One of the key aspects of this project is the attention to the reuse of heat and energy to create sustainable architecture. Therefore, it was decided that the Data Center should be combined with another function- The Baths. The latter is a space open to the public with different kinds of atmospheric experiences. It consists of pools with either hot or cold water and a different temperature of the air is created for each space. This generates different experiences of the space depending on which room is chosen and which trajectories through the space are taken. The space has an Ice Well, which thanks to the underground

conditions is able to keep the is frozen. The cold from the ice well is used to cool down the Server Rooms and also in the cold pool of the baths. On the other hand, the heat that is created by Server Rooms is distributed to The Baths to create warm air and to heat up the Hot Pools. In this way, the building is a living organism that sustains itself and does not create waste. Another very important feature of this project is its form, which is very closely related to its context.

To fully grasp the characteristics of this location it is essential to look closely at one of its treasures- the stone. Different kinds of stone are buried in the hills of Lessina, however, one that is of the biggest value is Scaglia Rossa Veneta- a limestone that is used not only in the architecture of Lessina's villages but especially in Verona and also exported outside the region. This Limestone is mined in the queries just next to the Project Site and can be found in its underground. That is why it was important in this design to look into the different quarrying techniques in the surrounding context. The oldest technique was Tunneling Mining, which created beautiful spaces inside the hills. This technique and those aesthetics were used in the formation of

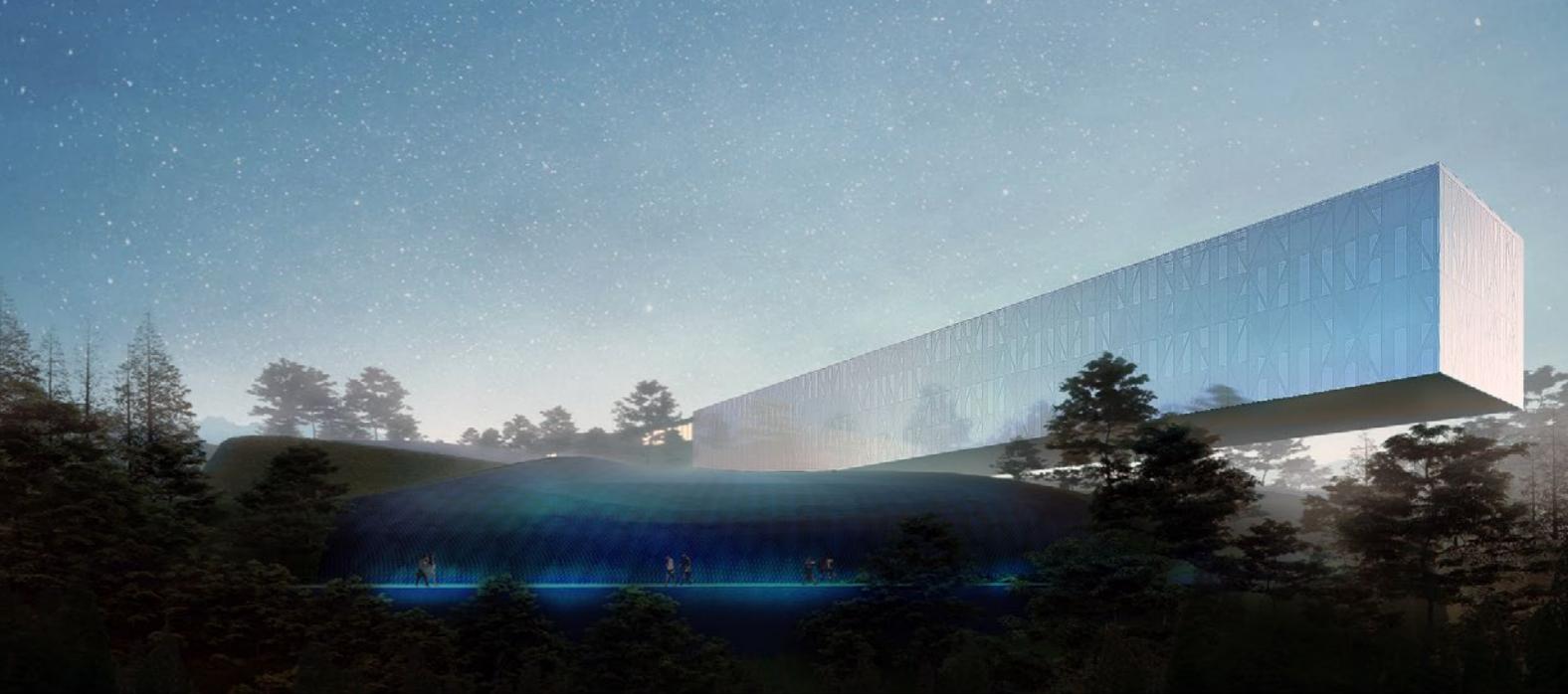
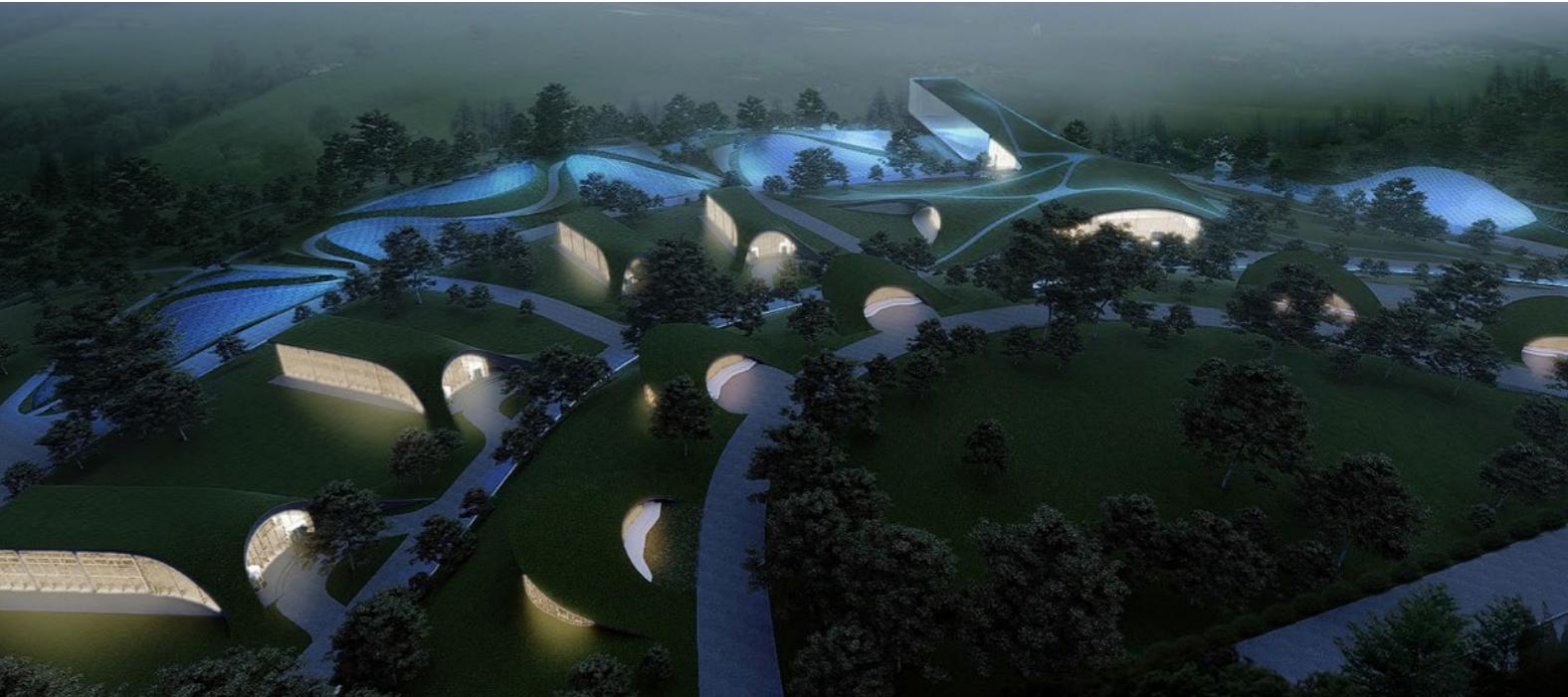
The Baths space. It created a beautiful spatiality that matches the experience of the atmosphere of that place. It also resembles the context and details from the surrounding architecture inside (like stone paving, stone detailing, etc.). The form of the Data Center was also taken from the surrounding. The hills of Lessina host various military forts which are partially buried underground and have four-sided shapes. This reference was used to create the Data center building, which just like the forts, has to be separated from the surrounding, with limited access. The form of the fort enables it and creates a functional building.

# aaa-studio



Photovoltaic panel : 0.16 KwH/m<sup>2</sup>  
Photovoltaic panel area : 25.706 m<sup>2</sup>  
Energy requirements : 7.130 kWh  
**Energy storage = 4.112.96 kWh**

Members: Livie Sukma  
Taristania, Pandu  
Sabilal Muhtadin,  
Insani Aulia Qisti,  
Adinta Dwiki Darmala  
Country: Indonesia



# Jury



Fedele Canosa  
Mecanoo



Patrick Lüth  
Snøhetta



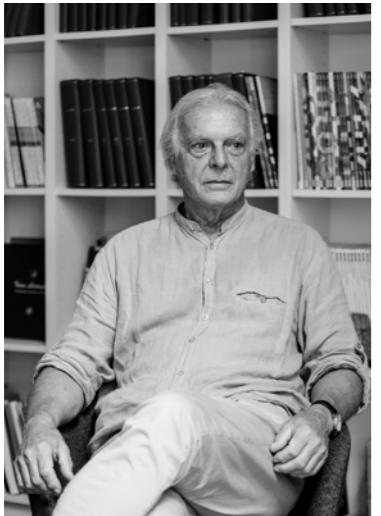
Enrico Frizzera  
Manni Group



Giorgio Ventre  
Università di  
Napoli Federico II - Apple  
Developer Academy



Alessandro Adamo  
DEGW Lombardini 22



Gianandrea Gazzola



Mats Wahlström Walter  
Ateljé Ö



Samuele Tommasi  
Comune di Sant'Anna d'Alfaedo

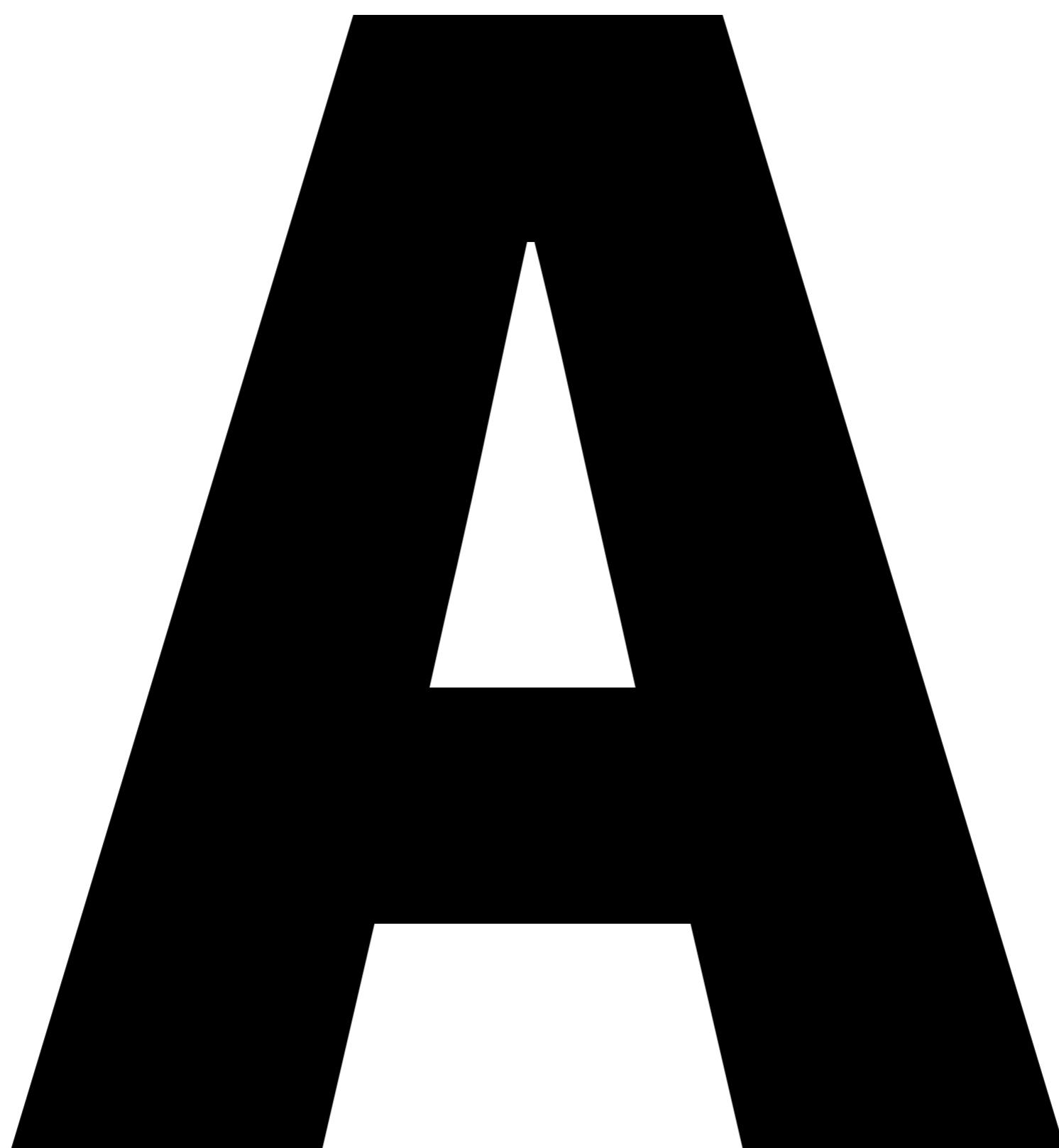
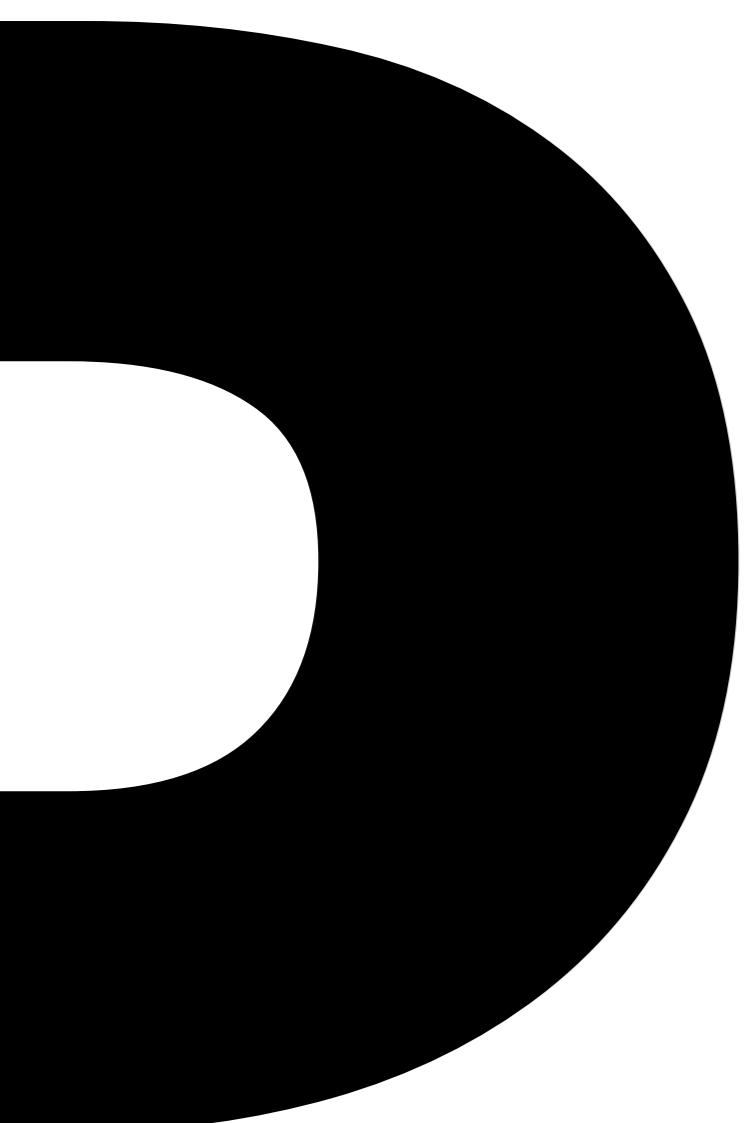


Jelena Vucic  
BIG Bjarke Ingels Group



Lorenzo Bottinelli  
BASF

## **Partners**



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Attraverso più di 75 anni di attività, il Gruppo si è internazionalizzato promuovendo i principi della Circular Economy e dell'edilizia sostenibile. Un impegno tradottosi nella lavorazione di materiali come l'acciaio, 100% riciclabile, e nella realizzazione di prodotti che contribuiscono al raggiungimento dei criteri per l'ottenimento delle certificazioni LEED e BREEAM come al rispetto dei CAM nazionali. Il Gruppo si avvale, inoltre, di strumenti volti alla trasparenza, quali gli EPD e l'etichetta DECLARE rilasciata da ILFI (International Living Future Institute).

Oggi più che mai guardare al futuro significa impegnarsi per un mondo più sostenibile, capace di conservare risorse ed opportunità esistenti a favore delle nuove generazioni: uno sguardo al futuro che non può prescindere dalla valorizzazione del talento e delle idee dei professionisti che ne saranno protagonisti.

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Manni Group provides systems, solutions and skills for the dry construction steel industry. It promotes new scenarios in order to remove energy waste and polluting emissions in the existing estate stock.

Thanks to its 75-years experience, the Group has turned international by promoting the principles of Circular Economy and sustainable construction. This entailed the processing of materials such as 100% recyclable steel to make products that contribute to meet the standards to obtain LEED and BREEAM certifications. Moreover, the Group relies on instruments to enhance transparency as EPD and ILFI's (International Living Future Institute) DECLARE label.

Today, more than ever, looking towards the future means committing for a more sustainable world. This world has to be able to preserve the existing resources and opportunities for the next generations. Without any doubt, this long-term vision has to enhance the talent and ideas of all the professionals that will be its protagonists.

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We create chemistry

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Ulteriori informazioni sono disponibili sul sito: [www.bASF.com](http://www.bASF.com).

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At BASF, we create chemistry for a sustainable future.

We combine economic success with environmental protection and social responsibility. Around 111,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €78.6 billion in 2021. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depository Receipts (BASFY) in the U.S.

Further information at [www.bASF.com](http://www.bASF.com).



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Nel Gruppo ROCKWOOL ci dedichiamo ad arricchire la vita di tutti coloro che entrano in contatto con le nostre soluzioni. La nostra expertise si presta perfettamente a far fronte a molte delle principali sfide odiere in fatto di sostenibilità e sviluppo, dal consumo energetico all'inquinamento acustico, dalla resilienza al fuoco alla carenza idrica e alle alluvioni. La nostra gamma di prodotti rispecchia la diversità di bisogni a livello mondiale e aiuta i nostri stakeholder a ridurre la propria impronta energetica.

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At the ROCKWOOL A/S, we are committed to enriching the lives of everyone who experiences our product solutions. Our expertise is perfectly suited to tackle many of today's biggest sustainability and development challenges, from energy consumption and noise pollution to fire resilience, water scarcity and flooding. Our product range reflects the diversity of the world's needs, while supporting our stakeholders in reducing their own carbon footprint.

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### SPONSOR

Tecnologia avanzata, esperienza consolidata in 50 anni, ricerca costante della qualità, flessibilità e servizio al cliente, sono i punti di forza di Arvedi Tubi Acciaio S.p.A, leader nei tubi saldati per applicazioni speciali. L'azienda cremonese detiene una quota considerevole di mercato nei settori automotive, applicazioni meccaniche, trasmissione del calore e apparecchi a pressione, piping, costruzioni industriali e civili. Il verde fa la differenza. 100% acciaio da un processo innovativo.

Arvedi Tubi Acciaio produce profilati cavi strutturali stampati a freddo tondi, quadri e rettangolari saldati ad alta frequenza secondo la norma EN10219-1/2/3 e con il marchio "Leonardo" Profilati cavi finiti a caldo secondo EN 10210: la perfezione dello stampaggio a freddo con tutti i vantaggi della finitura a caldo, per le applicazioni più severe nell'edilizia civile.

L'impegno di Arvedi Tubi Acciaio per l'ambiente è testimoniato dal costante monitoraggio delle emissioni e dal rigoroso rispetto degli standard internazionali. Nel 2005 è stata tra le prime aziende italiane ad ottenere la certificazione ISO 14001 e nel 2022 ha confermato la certificazione di consapevolezza dell'impronta di carbonio con la Dichiarazione Ambientale di Prodotto (EPD) relativa ai profilati cavi strutturali.

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Advanced technology, experience consolidated over 50 years, the constant search for quality, flexibility and customer service, are the strong points of Arvedi Tubi Acciaio S.p.A, a leader in welded tube for special applications. The Cremona-based company holds a considerable share of the market in the automotive, mechanical applications, heat transfer and pressure equipment, piping, industrial and civil constructions. Green makes difference. 100% steel from an innovative process.

Arvedi Tubi Acciaio produces high frequency welded cold-formed round, square and rectangular structural hollow sections according to standard EN10219-1/2/3 and under the brand "Leonardo" Hot Finished Hollow Section according to EN 10210: the perfection of cold formed with all the benefits of hot finished, for the most severe application in civil construction.

Arvedi Tubi Acciaio's commitment to the environment is proven by its constant monitoring of emissions and strict compliance with international standards. In 2005 it was among the first Italian companies to obtain ISO 14001 certification and in 2022 it confirmed its carbon footprint awareness certification with its Environmental Product Declaration (EPD) relative to structural hollow sections.

## Patronage



COMUNE DI SANT'ANNA D'ALFAEDO





