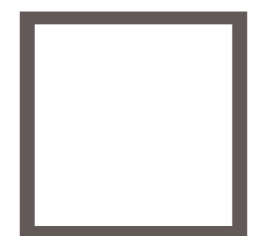
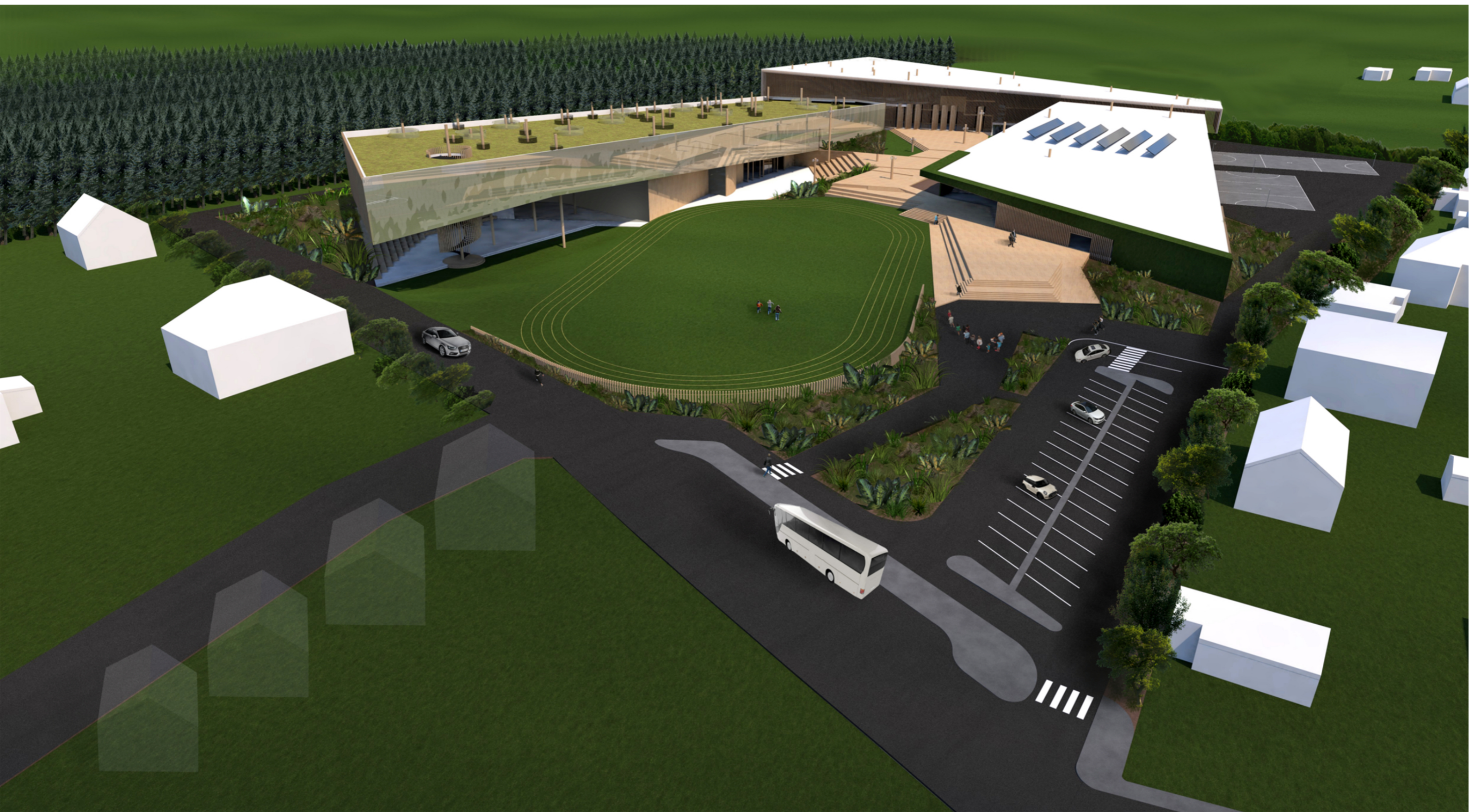


NEW LOŠBATES SCHOOL



The **New LOŠBATES School** is designed as a building on which all spaces are aligned with the **modern-learning environment**; a school where **Active** Learning, **Project-Based** Learning, **Problem-Based** Learning, **Discovery** Learning and **Conventional** Learning can symbiotically interact instead of conflicting with each-other, a building on which the **gradual growth of learning** is evident both from outside and inside and where the spaces also allow for the relevant **Learning-Design** performed by the academic team.



# Urban Solution, Architectural Solution, Public Spaces

The project addresses the local context by producing a building that; although suggests the continuous and gradual growth (later explained in the following pages) – it cautiously addresses the low-rise neighboring built-environment.

The empty land area indicated in Panel 2 – (west portion of the proposed site) is currently proposed for subdivision – our proposal aligns with this and assigns that land for the design and construction of the block of units for the staff-members of the school, this will allow staff-members to be surrounded by already established neighbors and therefore foster community life. It'll also allow staff members an opportunity to buy in the local market and therefore a further step of commitment with working and living in the area – at the same time; the interaction with neighbors will result in the community knowing better some of the teachers and/or ancillary staff that work with their children.

The building shape fosters a gradual growth through three main wings (south east and north) the latter being the highest – in order to match as best as possible within the neighboring built context, the land in the north wing is proposed to be excavated and therefore creating public spaces that are besides the auditorium and the cafeteria – this allows the possibility of the community using those spaces (rules around this will need to be agreed with the school's board). The north-wings main (south) facade is proposed in reflective glazing, a mimetic strategy that allows the building to blend with the environment by becoming less evident.



The running grounds is located at existing ground level – it's viewing sitting area matches the level of the public area that approaches the school's entrance which at the same time connects with the courtyard, another public space that then descends towards the cafeteria (below the north-wing) achieving therefore a smooth transition between public and private areas.



# Transport Solution | Parking\* - Traffic Crossing - Connection to I/2 road

\* Parking & Bus Stops

Refer to Board 2 (ground floor plan and key).

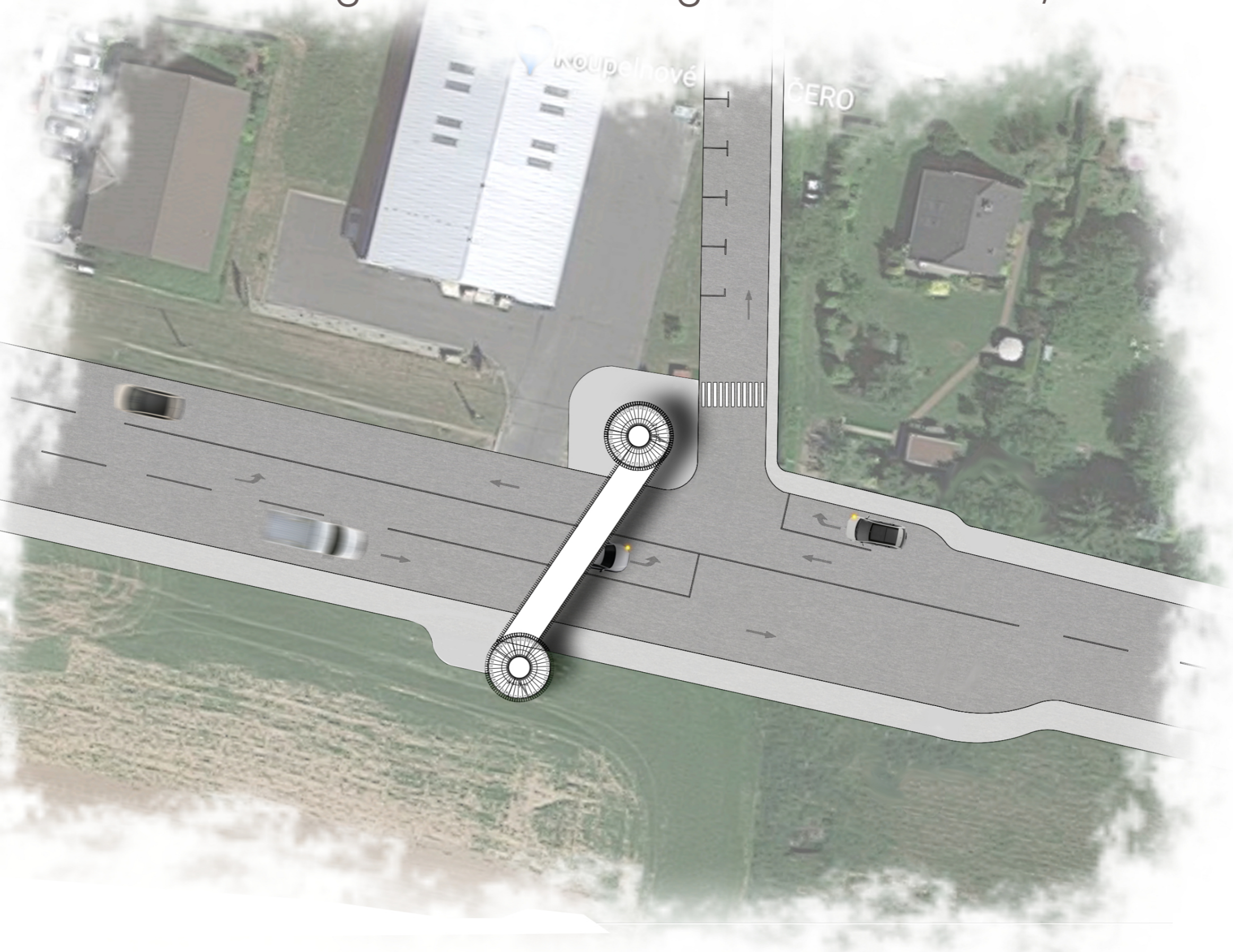
## Description:

The proposed new road entering the site from Kutnohorska I/L becomes a **one-way road with public parking** on the left side.

Upon arriving to the corner (right), a **one-way road is proposed to loop the entire school grounds** – a **parking area for visitors** and a few specific staff members is located from that corner limiting with the pedestrian area leading to the school's main entrance – Buses don't have access to that parking area (right side) but a **Bus-stop** is proposed adjacent to it – Buses and vehicles (exiting the parking area or not having accessed it) can continue straight and then turn left on Souběžná Rd.

Vehicles accessing the proposed **one-way road surrounding the school** (after the parking area ) will be able to loop the building, there's **sufficient staff-parking** is located at the back of the north wing as also on the west side of it.

Vehicles then exit by turning to Soubezna rd. and then exiting the area at the corner of Zájední with Kutnohorska I/2.



## Traffic Crossing & Connection to I/2 road

### Description:

The proposed solution aims to functionally address the problem of allowing traffic to flow while also turning to enter the school and – at the same time – achieving a “**Landmark**”, an element that **relates to the school building** and that can therefore become a **reference point** to be seen from a distance when driving; this will allow drivers to recognize the area and **slow-down** - a change of paving of the road in order to induce to speed-reduction is also highly recommended.

In the **direction from Prague**, the lane opens from a certain distance generating another **parallel lane** to the right, this lane will be the one used to continue going through Kutnohorska I/2 – while the left lane reaches a “stop” to turn (left) towards the new proposed road leading to the school (besides building 368).

In the direction **towards Prague**, a similar scenario is proposed, a **second (right) lane** is proposed which on this case is for the purpose of turning (right) towards the school, the left lane remains free to continue traffic flow towards Prague.

The **positioning of the landmark** was decided based on **views** to and from the direction to Prague as also taking into consideration the fact that the land towards Building 368 provides a perfect opportunity to ensure enough land is available – the landmark is an **elevated crossing** that architecturally relates to the **same circulation element** that connects the **school's library** with the bottom **exterior/public space** and also with the **roof garden**.



# Construction and Facade Solutions

Description:

## Proposed Structure:

Timber or timber-derived (LVL) beams and columns

Exterior Walls – Reinforced Concrete

Exterior Walls – CLT – Cross-Laminated Timber

Slabs – Interspan or similar (to be decided based on Structural Engineer's advice).

The structure is aimed to be from locally-sourced timbers or timber-derived products, - due to the scale of the building - a combination of timber structure with bracing elements in steel and reinforced concrete system (interspan or similar) for the slabs is feasible and has been successfully achieved by other case-studies examined for this proposal.

## Facades:

As per project:

Reflective Glazing (mirror effect).

Vertical Stag Timber Facade

Concrete Walls

CLT Walls

Green-wall System (entrance).

## Pods:

Timber-Framed (possibly pre-fabricated)

Timber Finish

Glazed

Sphere-Rollers at bottom with break system.

## Exterior Paving

Mixed of exposed aggregates

Exterior Timber Decking (High resistance).

Anti-slippery coef. as per local regulations.

Parking areas: as per local regulations.



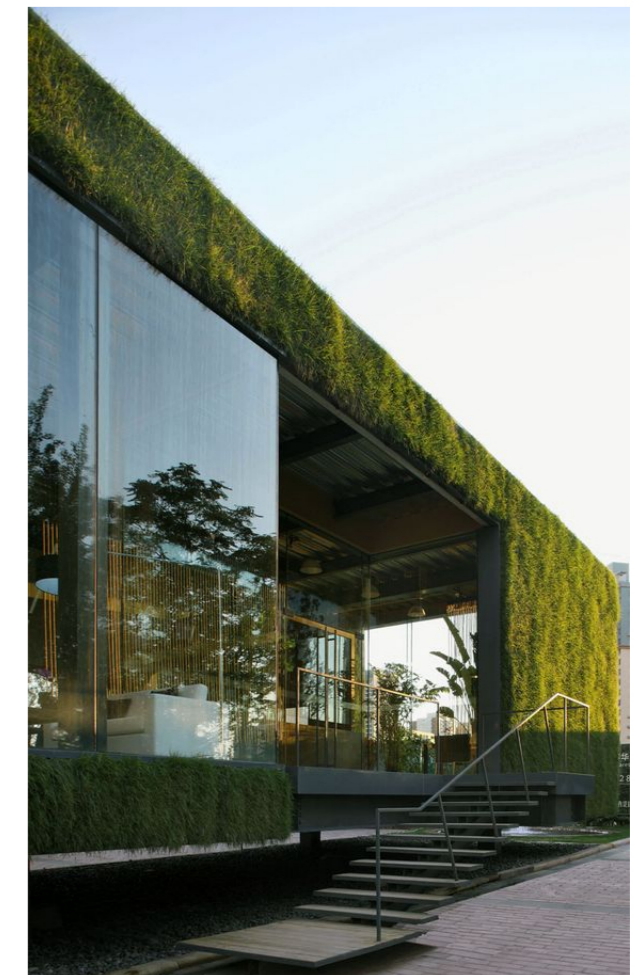
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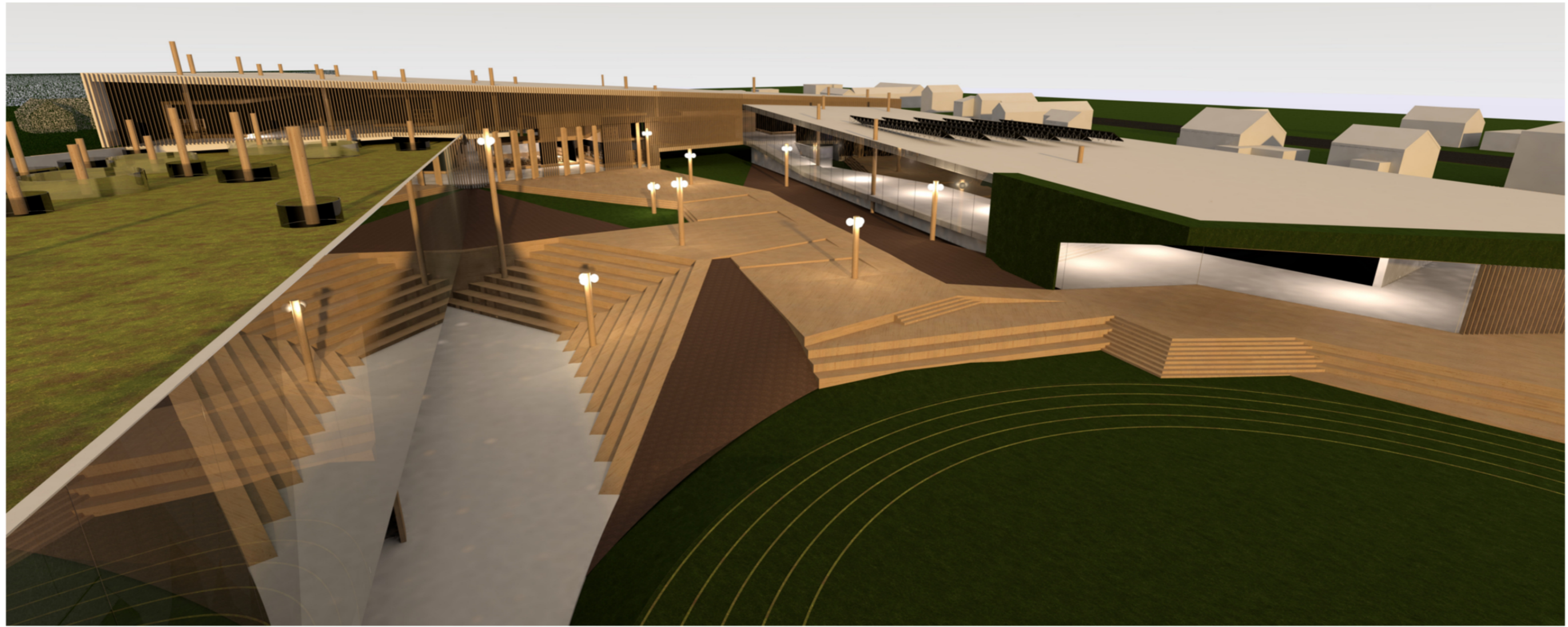
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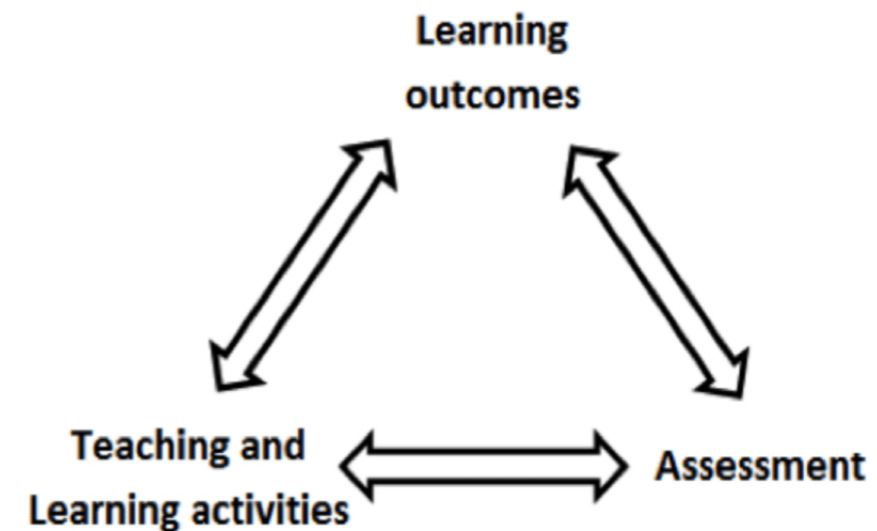
# Operation and Functional links - Ground & Building

Modern learning environment is usually related to **active-learning** on which tutors become learning facilitators and the learner is involved actively in his/her own learning process; however, the back-stage of this scenario is much more complex as it requires quite a long time on **learning-design** from tutors and program leaders.

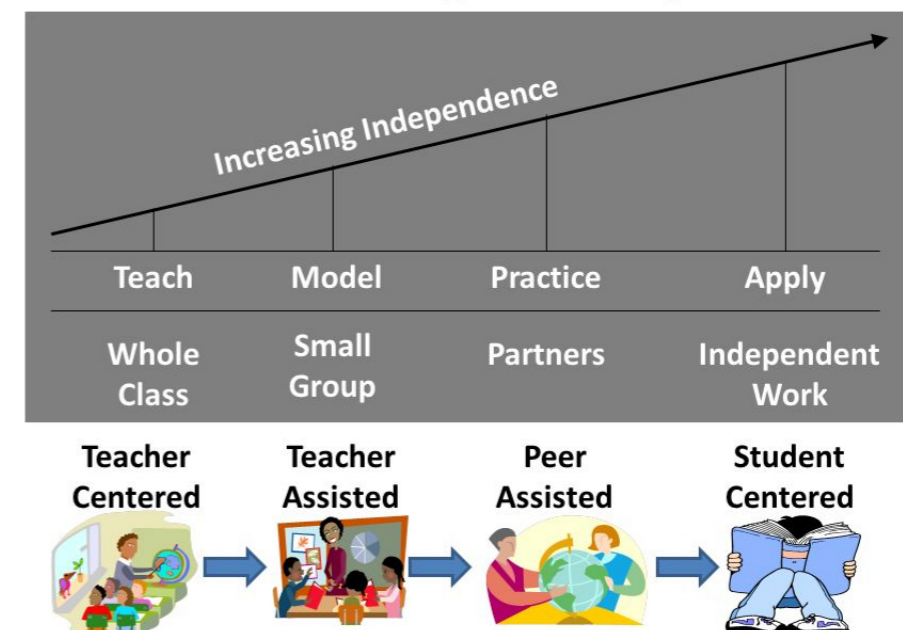
On this environment; the learning is underpinned by the integration of a **student-centered-approach** to all actions and planning regarding curriculum and **learning-design**, therefore applying a balanced interaction of the three main forms of learning that are called **LBT** (learning by being taught) – **LIS** (Learning by Independent Sense-Making (learning by doing)) and **LBKO** (Learning by Building Knowledge by doing things with others). The aim is to achieve an “expert-learner” that will be capable to also self-reflect on their journey.

A key factor on the planning and **learning-design** is a principle called **Scaffolding in learning**, this principle sees the learning as a gradual succession of achieving skills and/or knowledge that then underpins the next level of learning, for the Scaffolding process to work, there needs to be a clear **alignment** between the **Learning Activities** (what is done during the sessions in order to learn), the **Learning Outcomes** (what they need to achieve on that specific time of learning on a specific course) and the related **Assessment Tasks** (the form of measuring that learners have achieved the required learning - e.g. projects, etc.). This process of Learning Design is called in academic terms: **Constructive Alignment**.

Therefore; a school that fosters modern learning environment needs to allow for – not only the **active-learning** approach that is seen in open-spaces with students finding their own learning by being assisted by tablets and other forms of technology and/or learning facilitators; It also needs, with **equal importance**; the allowance for **spaces that foster all three forms of learning** as above mentioned as also spaces that are coherent with the proposed methodologies for the academic staff members to be able to properly plan the **learning-design** that happens in the “back stage”.



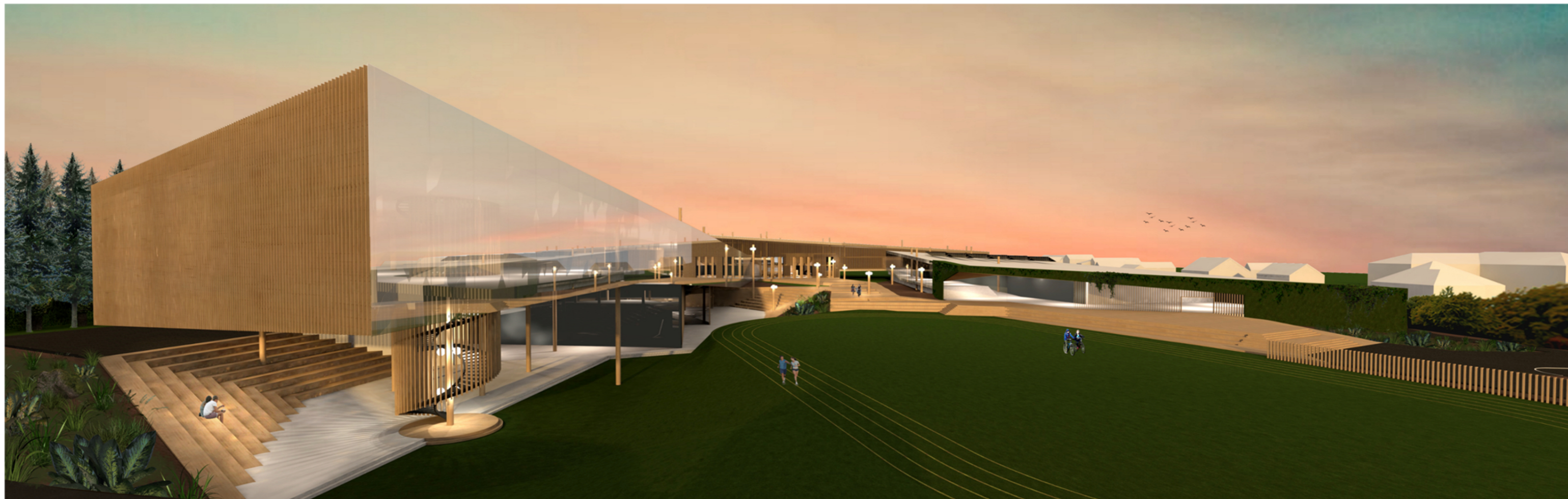
## Scaffolding techniques



acknowledgment: third-party source

Several reasons (that are gradually mentioned in this booklet) have led to propose the building with an “**ascending**” nature - integrating a **C-Shape** form has also allowed the building to continue the feel of gradually elevating while at the same time being able to **see/live** these sensations and spaces from the **inside-out** and from the **outside-in**.

As the **inter-connecting ramp** (and spaces besides it) develops, it **relates visually** with what is happening in the **courtyard**, in the **running-field**, and even in the lower-areas below the north-wing (**cafeteria, auditorium, etc.**) - from the south-wing one can view the north and east wing and vice-versa. The aim has also been to create a **sense of “community”**, a place where everyone feels the relationship with the neighboring side through the **proper approximation** between the buildings and therefore; people.



# Operation and Functional links - Expansion to 3 x 9

LOŠBATES New School has been designed under the principles cited in the previous section – the building therefore develops as a **sequence of levels** – each related to **specific academic years**, from elementary to the last year required – these levels are interconnected by a main ramp which acts both as a circulation system as well as a place of connections between students and tutors. As each year “Scaffolds” to the next one (in terms of knowledge and achieved learning), each level “Scaffolds” to the next one – students can therefore personally connect and reflect – in their specific academic year – to how much they have learned throughout the years...and how much they can still learn. The **highest of these levels** is not for the final academic year, but for the **Library** – this aims to remind (both students and tutors) that once achieving the so-called “last-year”; there is still much more to learn.

These spaces “**ascend**” as the academic years “ascend” in level and in-depth of knowledge and skills, and the “ascension” of these spaces is lived and perceived throughout any time by the use of the **inter-connecting ramp** which brings students from different years together encouraging interaction and fostering collaboration throughout different academic years.

The **learning spaces** on the building **are also an answer** to the different forms of learning which **ensures** proper **Learning Design** and **Constructive Alignment** will be achieved by the academic team. **Three main spaces** deriving from the use of each Base level on which; the **flexible positioning** of the “**Learning Pods**” (enclosed independent spaces for content-focus learning) result in the remaining common-areas called “**Interstitial Spaces**” which are suitable for more active and group-related activities and finally; the “**mezzanine-like**” spaces on **top of the Pods** – which are suitable for study-time or other type of learning that does not require an enclosed area like the Pods, nor a fully open space like the Interstitial spaces. **Three type of spaces** suitable for **LBT – LIS** and **LBWO**



## EXPANSION STRATEGY

**1.- Three Types of Spaces** that can be equally time-tabled – All three spaces (Learning Pod – Interstitial and Mezzanine-Like (top of Pod) can be timetabled to different sessions occurring at the same time.

**2.- Increase Pods when needed** – The main spaces/levels for academic year allow for extra pods to be added if/when needed and therefore making the **transition from 2 x 9 to 3 x 9 classes easily feasible**.

**Current Amount of Pods** as per design proposal (plans & sections)

**19** Pods for approx **32** Students – Total **608** Students

**10** Pods for approx **16** Students – Total **160** Students

**PLUS** Interstitial Spaces and Top of Pods

**Note** – Current proposal **also** allows space for:

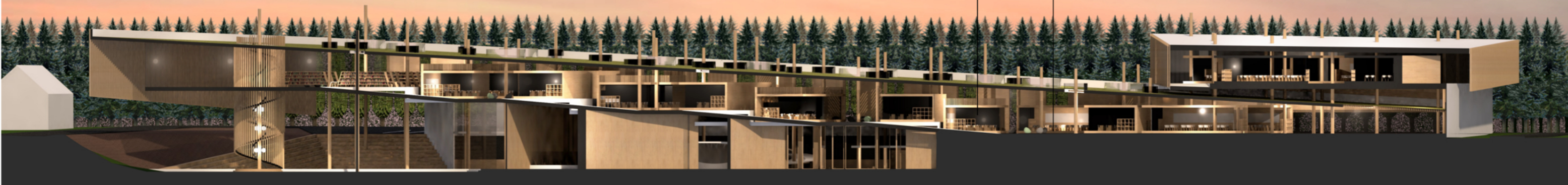
**2 spaces** for **20** students each (total **40**) of preparatory classes and;

**2 spaces** for **25** students each (total **50**) for after-school classes



The use of "**Learning Pods**" is introduced as a solution to achieve spaces that require a more **content-focus** delivery - these **Pods** give the option of **enclosed** teaching environment (classroom-like) while being visually open. A space within the main space and a structure within the structure of the building - they can be built by an **independent** timber frame and **can be moved** to suit (sphere-wheels option at the base); offering flexible options for laying out and still allowing the remaining spaces between them (**interstitial** spaces) to be used for other forms of learning requiring more interactivity with other students (e.g. active learning, discussion, etc) - The **top-part** of these Pods is also available for students/teachers when needing to use a space that is less exposed - yet not enclosed - if/when needed.

**Interstitial** spaces / **shared-learning** areas; these are the "**base-level**" for each year of study throughout the building - from elemental to the final year - they **allow active-learning to flow** as needed **without disrupting** the content-delivery happening in the **Learning pods**. The building itself is a subsequent continuity of these spaces that are a result from the flexible laying out of the Pods, these levels "**ascend**" through the **inter-connecting ramp** allowing students from different years to feel inspired by seeing what they'll be doing in the next years (levels) or feel helpful to assist the younger ones located previous years/levels.



# Grounds & Design Energy Concept

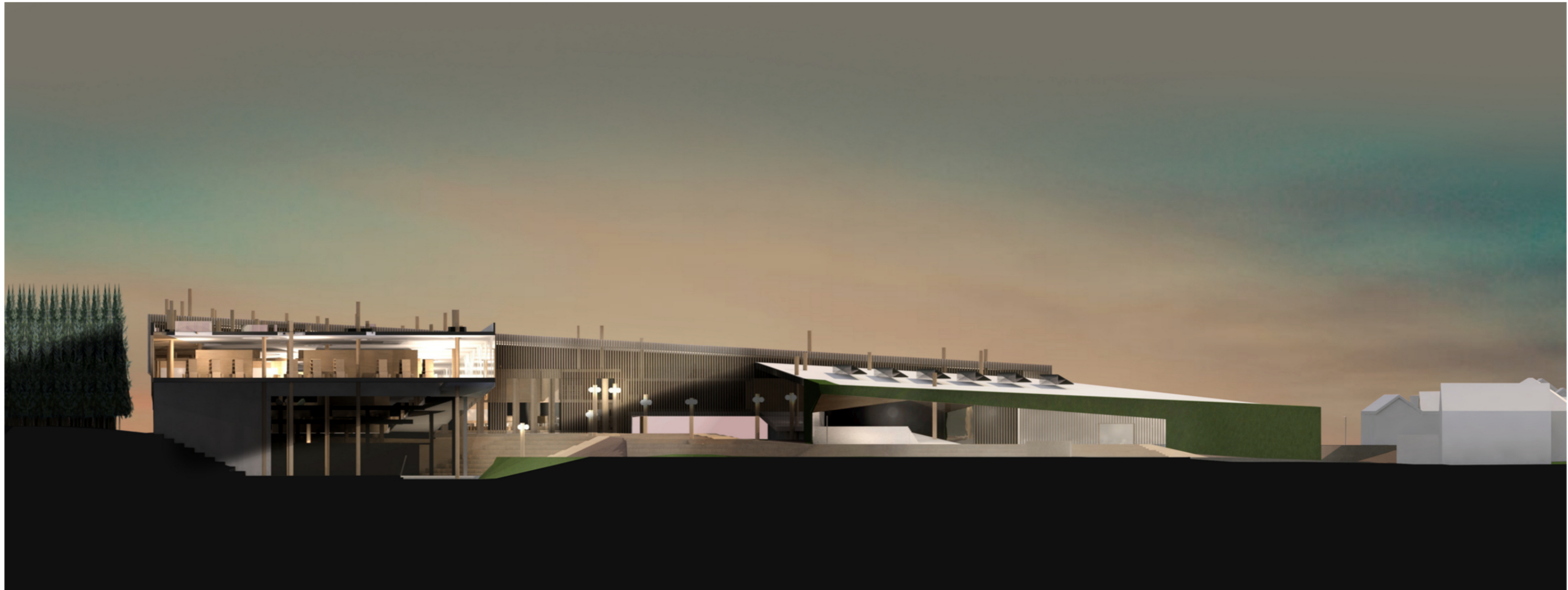
The design of the building has taken into consideration principles of Passive Solar design and energy-efficiency throughout the building.

The main forms of the building (C shape – with center courtyard) was proposed in order to ensure the right amount of sun-light gets through it during the winter months – the south-cladding of the north-wing is proposed of reflective-glass curtain-wall which, during winter allows through the majority of the sun while in summer reflects it.

The main structure of the building is a mix of wood (pillars, facade elements, wall CLT panels, etc) which drastically reduce the building's carbon-footprint – at the same time; strategic areas are being proposed in concrete in order to capture the heat as thermal mass.

The roof's shape of the south-wing and east-wing are design for ideal use of solar PV and solar hot water panels – there's sufficient roof-area to achieve a zero-energy building which will therefore sustain part of it's costs by also selling energy to the national grid.

## SHADOWS - WINTER SOLSTICE



Both south and east-wing roofs are also ideal to collect rain-water and sufficient space is available to ensure the positioning of relevant water-tanks and the surrounding green areas can also contribute to the filtering of gray-waters.

The north-wing roof is proposed as a roof garden for both recreational and educational purposes – being the building with highest sun exposure – achieving roof garden would allow to balance the temperature due to the thick earth-layer above the building.

We also fully recommend targeting a carbon-zero building with this proposal and therefore the building aims to reduce as best a possible any costs related to heating during winter.

SHADOWS - SUMMER SOLSTICE

