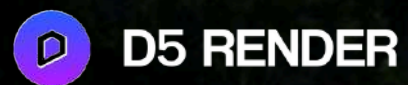# MASTERING ARCHITECTURAL VISUALIZATION

Explore how to enhance BIM models with high-quality rendering, real-time visualization, and immersive presentations.

GRAPHISOFT **Archicad®**   **D5 RENDER**   **TWINMOTION**   chaos **Enscape**

Image courtesy - Canva

COURSE OBJECTIVES

- To gain proficiency in rendering architectural models created in Archicad using Archicad, Twinmotion, Enscape and D5 Render.
- To understand the principles of photorealistic rendering and their application in architectural visualization.
- To learn to effectively utilize live-syncing, data export, and rendering settings for efficient workflow.
- To develop skills in texturing, lighting, and material creation for high-quality renderings.
- To create compelling still images and dynamic videos for architectural presentations.
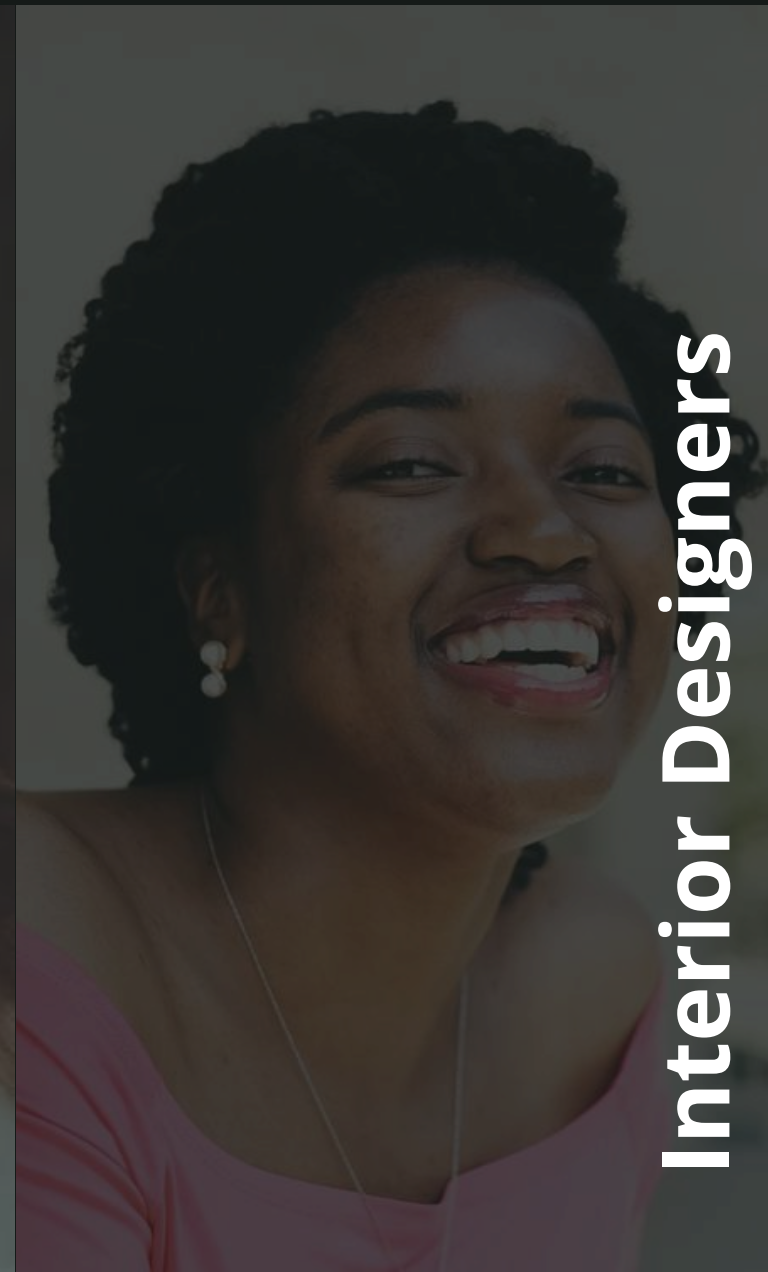
Image courtesy - JJJ & D5 Render
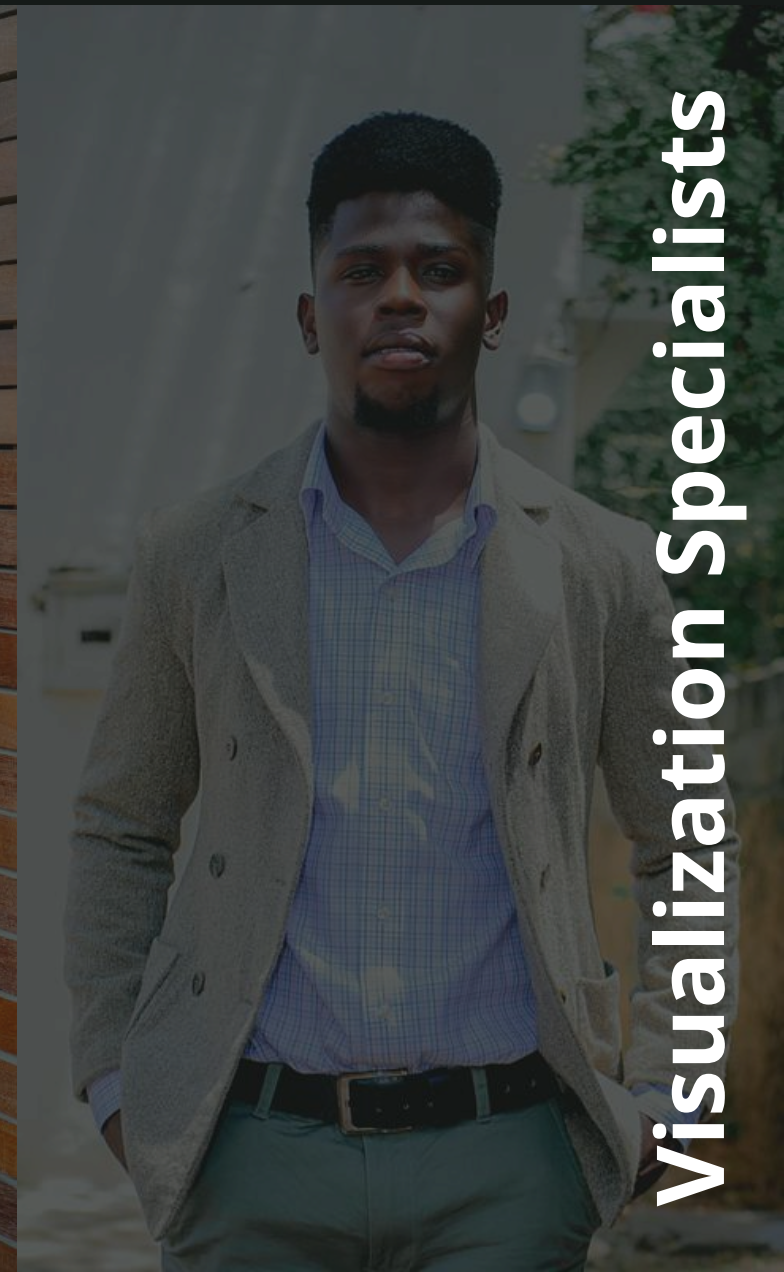
WHO CAN LEARN

Architects

3D Modelers

Interior Designers

Architectural Designers

Visualization Specialists

PREREQUISITES

- Basic understanding of architectural principles and design concepts.
- Working knowledge of Archicad software.
- Familiarity with 3D modeling concepts (basic).

Image courtesy - Canva

MODULE 1

Introduction to Architectural Rendering

Image courtesy of Graphisoft

01

Rendering Concepts

- Principles of photorealism and realism in architectural visualization.
- Types of rendering (ray tracing, path tracing, global illumination).
- Importance of rendering in architectural communication.
- Rendering Terminologies

02

Rendering Software Overview:

- Introduction to Twinmotion, Enscape, and D5 Render.
- Key features and capabilities of each software.
- Comparison of strengths and weaknesses.
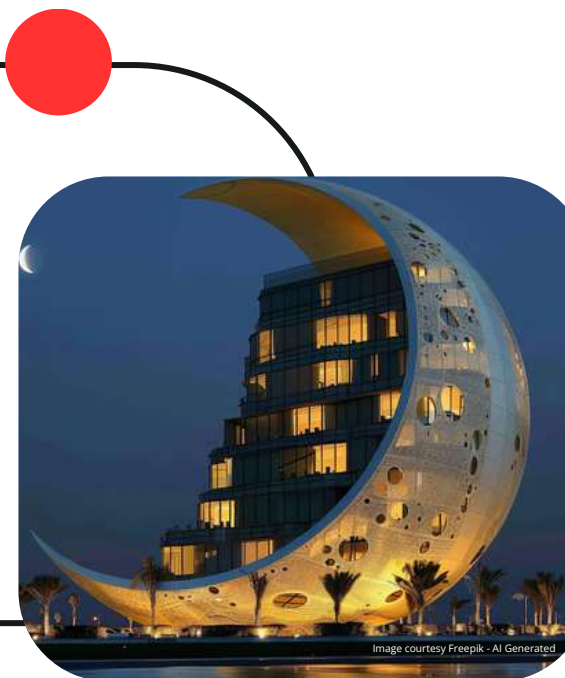- Choosing the right rendering software for specific projects.

Image courtesy Freepik - AI Generated

INTRODUCTION

MODULE 2 | **Working with Archicad Models**

01 **Model Preparation for Rendering**

- Checking model geometry for errors and inconsistencies.
- Optimizing model complexity for efficient rendering.
- Assigning materials and textures in Archicad.
- Creating and organizing layers for better workflow.

02 **Data Export and Live-Syncing**

- Exporting Archicad models to Twinmotion, Enscape, and D5 Render.
- Understanding live-syncing workflows and their benefits.
- Troubleshooting common issues with data transfer.

Image courtesy of Svetlana Kravchenko architect & Graphisoft

Image courtesy of idei.club

GRAPHISOFT
Archicad®

Image courtesy of Zaha Hadid Architects & Twinmotion

MODULE 3 | Twinmotion

01 **Twinmotion Interface and Workflow**

- Navigating the Twinmotion interface.
- Utilizing the material library and creating custom materials.
- Implementing atmospheric effects (fog, rain, snow).
- Creating and animating cameras.

02 **Lighting and Day/Night Cycles**

- Understanding global illumination and indirect lighting.
- Working with lights (point lights, area lights, sun/sky).
- Creating realistic day and night.
- Utilizing image-based lighting (IBL).

03 **Rendering Settings and Output**

- Adjusting render quality and resolution.
- Choosing appropriate render settings for different outputs.
- Rendering still images and animations.
- Exporting renderings for presentations and presentations.

Image courtesy of Shau & Twinmotion

TWINMOTION

MODULE 4 | Enscape

01 **Enscape Interface and Workflow**

- Navigating the Enscape interface.
- Real-time rendering and walkthroughs.
- Utilizing the material library and creating custom materials.
- Implementing environmental effects (clouds, fog, water).
- Creating and animating cameras.

02 **Lighting and Day/Night Cycles**

- Understanding real-time rendering and its limitations.
- Working with lights and adjusting light levels.
- Creating day and night cycles.
- Utilizing environment maps for realistic lighting.
-

03 **Rendering Settings and Output**

- Adjusting render quality and resolution.
- Rendering still images and animations.
- Exporting renderings for presentations and presentations.

Iamge Courtesy Joel Guerra - CONCRETO & Enscape

Image Courtesy Nhat Quang - WABI SABI bedroom & Enscape

chaos Enscape

MODULE 5 | D5 Render

01 **D5 Render Interface and Workflow**

- Navigating the D5 Render interface.
- Working with the scene graph and material editor.
- Utilizing the material library and creating custom materials.
- Implementing atmospheric effects (fog, rain, snow).
- Creating and animating cameras.

02 **Lighting and Day/Night Cycles**

- Understanding physically-based rendering (PBR).
- Working with lights and adjusting light levels.
- Creating realistic day and night cycles.
- Utilizing image-based lighting (IBL).

03 **Rendering Settings and Output**

- Adjusting render quality and resolution.
- Choosing appropriate render settings for different outputs.
- Rendering still images and animations.
- Exporting renderings for presentations and presentations.

Image Courtesy Agacan Kaya & D5 Render

Image Courtesy Zerren & D5 Render

D5 RENDER

Image courtesy of Graphisoft

MODULE 6 | Advanced Rendering Techniques

01 Creating PBR Materials

- Understanding PBR materials and their properties (albedo, roughness, metallic, etc.).
- Creating custom materials using textures and maps.
- Applying materials to objects for realistic appearance.

02 Advanced Lighting Techniques

- Using HDRI maps for realistic lighting.
- Creating custom light sources and lighting setups.
- Understanding global illumination and its effects.

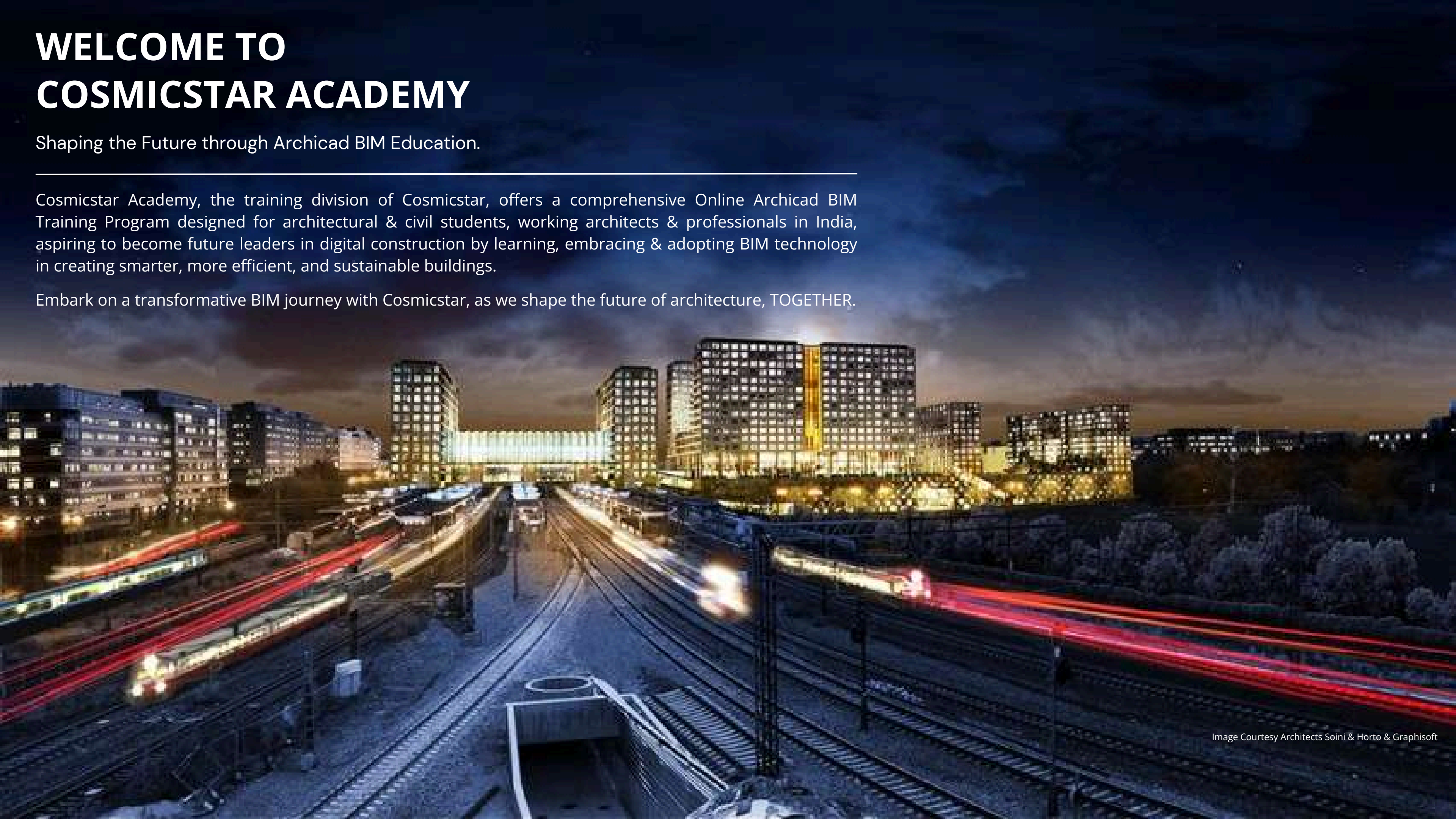Image courtesy of Mike Wayne and desktop architect

Advance

WELCOME TO
COSMICSTAR ACADEMY

Shaping the Future through Archicad BIM Education.

Cosmicstar Academy, the training division of Cosmicstar, offers a comprehensive Online Archicad BIM Training Program designed for architectural & civil students, working architects & professionals in India, aspiring to become future leaders in digital construction by learning, embracing & adopting BIM technology in creating smarter, more efficient, and sustainable buildings.

Embark on a transformative BIM journey with Cosmicstar, as we shape the future of architecture, TOGETHER.

Image Courtesy Architects Soini & Horto & Graphisoft

THANK YOU

COSMICSTAR ACADEMY
ILLUMINATING FUTURE

Register Here :

https://mycosmicstar.com/training/register.html

Contact Us :

Sathish Mathysekaran

sathish@mycosmicstar.com

9342250117

www.mycosmicstar.com

Image Courtesy BESSARDs' Studio & Graphisoft