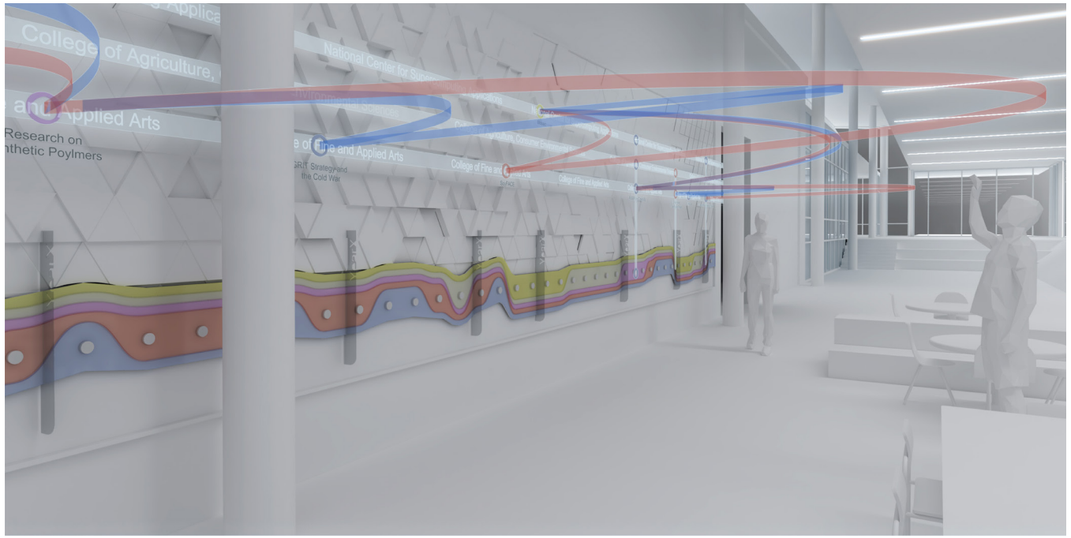
Mural Project

Siebel Center for Design

Celebrating Multidisciplinary Innovation at Illinois

Developing Concepts and Production Methods—June 2021

Concept Development

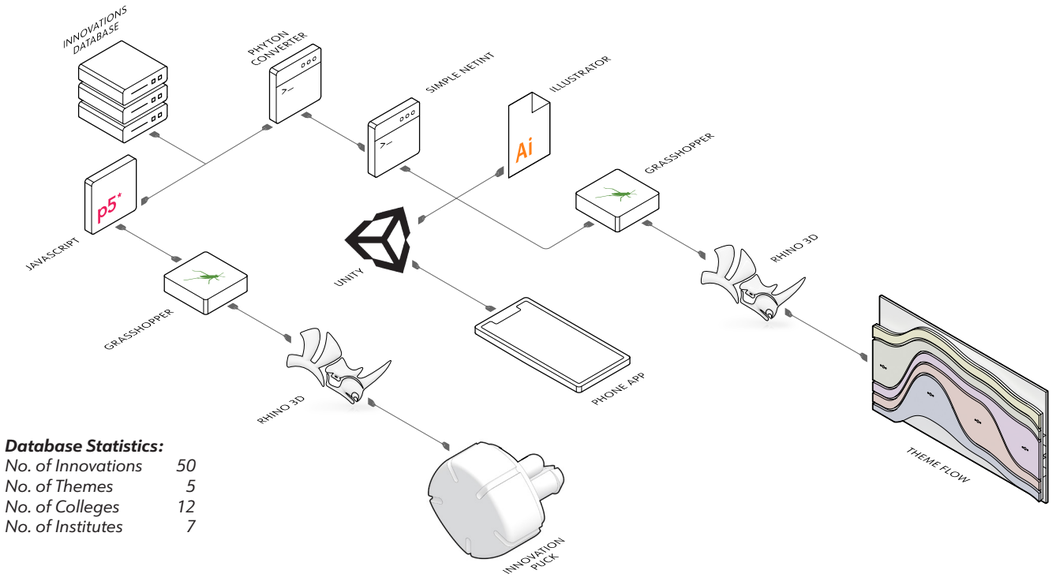


Representation of the mural components: Innovation Landscape, Theme Flow, and Augmented Reality

The mural details the colorful lineage of scholarship, collaboration, and innovation at the University of Illinois at Urbana-Champaign. It also celebrates contributions beyond campus through a parametric design that manifests the diverse stories physically and digitally.

The narratives within the mural will prime visitors to experience opportunities, collaborations, equipment, facilities, and resources available inside Siebel Center for Design.

Parametric Workflow



Database Statistics:

No. of Innovations	*50*
No. of Themes	*5*
No. of Colleges	*12*
No. of Institutes	*7*

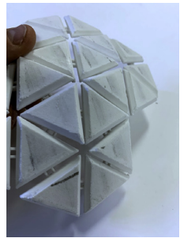
The University of Illinois Library assembled the Innovations Database. Each datapoint is comprised of an innovation from UIUC's title, descriptions, dates, links, collaborators, colleges, institutes, themes, and innovation types. All designs are parametrically defined by the Innovations Database. The information from the database is fed into the workflow and is converted for parametric design layouts.

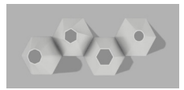
The database defines the form of assets across three different workflows: 3D models, 2D graphics, and augmented reality components. This parametric workflow affords extreme flexibility for designing large scale data-driven visualizations across multiple design softwares. All updates to the database can easily integrate into the workflow to be included in the final design.

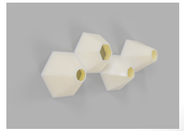
Innovation Landscape

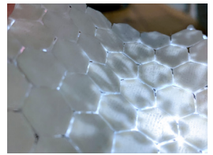
The Innovation Landscape is a three-dimensional construction that incorporates layers of information related to the history of innovation at the University of Illinois Urbana-Champaign. The canvas of the mural has been subdivided into cells that form a field that is informed by the timeline of innovation represented in the Theme Flow. This framework also acknowledges the characteristics of the local agricultural landscapes that have been a primary concern of scholars, faculty and students since the university was founded. Moments of creation and discovery emerge from the rhythms and repetition represented of the standardized modules.

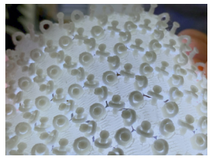
The Innovation Landscape portion of the mural also serves as a tool to demonstrate the potential of the Siebel Center for Design fabrication equipment. The Innovation Landscape is being developed by faculty and students who are using the machines that will be available to students when SCD opens. The fabrication facilities include tools for woodworking, electronics, 3D Printers, Laser Cutters, a Vinyl Cutter, a CNC Router and a Waterjet. These will serve as great resources for students to prototype and fabricate their design ideas. The Innovation Landscape team is currently testing this equipment and a variety of materials in the development of this showcase.

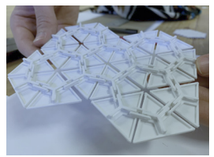


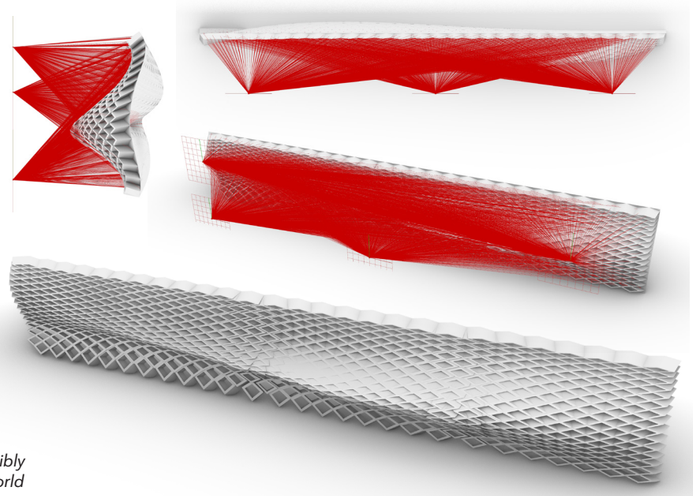






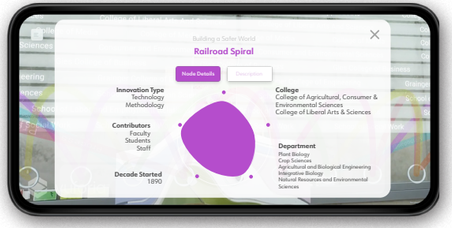






Carl Shipp Marvel's innovation—the "cold-rubber," process and synthetic rubber, was developed at the University of Illinois during the 1930's and was incredibly important for Allied manufacturing efforts during World War II. The molecular structure of the innovation serves as an inspiration for the Innovation Landscape.

Augmented Reality



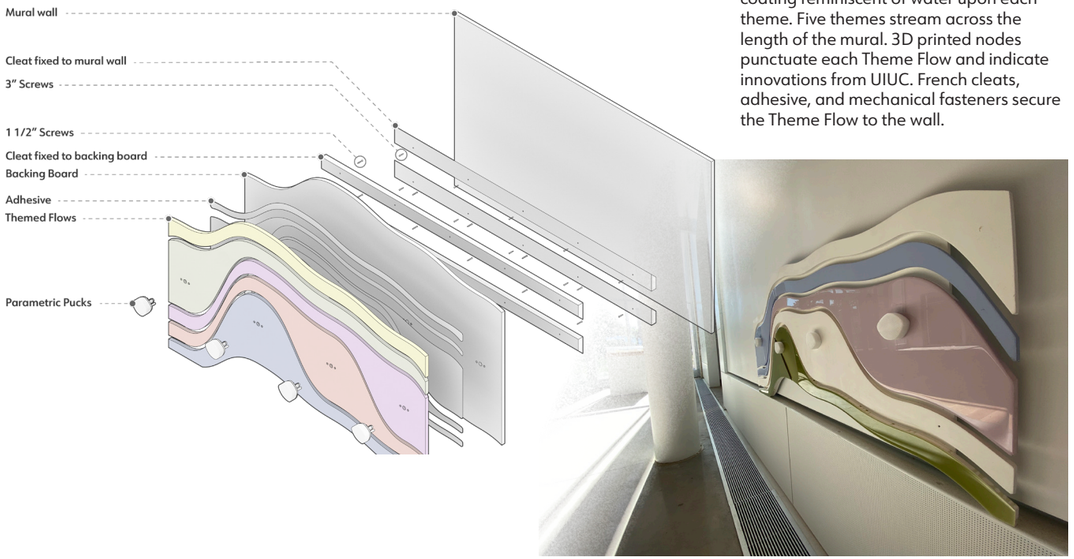
Visitors can dive in the mural by accessing a custom made application on their smartphones. More information regarding a particular innovation is revealed upon a user's touch on a node through the app. The "Node Details," are displayed within an overlaying window revealing its innovation types, contributors, decade, participating colleges, and departments. If users seek more information they can select the "Description," tab which will provide additional info and links.

Ribbons representing types of innovations bounce on-and-off the wall connecting one node to another. As a result, four color coded ribbons—one color for each of the four types of innovations in the dataset—fly over the user's viewpoint.

On user's interaction upon one node, the ribbons are deployed on top of a sequence of stripes that represent UIUC's colleges and institutes, portraying the richness of UIUC's creative platform.

The interface allows users to look at the visual data on a much more granular level by applying filters to the viewing criteria, such as date ranges, innovation types, and themes.

Theme Flow & Node Construction



The Theme Flow is a stream composed of five themes and 50 innovation nodes mounted at regular intervals. Poured epoxy resin solidifies into a smooth hardened coating reminiscent of water upon each theme. Five themes stream across the length of the mural. 3D printed nodes punctuate each Theme Flow and indicate innovations from UIUC. French cleats, adhesive, and mechanical fasteners secure the Theme Flow to the wall.

Facilities

Siebel Center for Design

Architecture Fabrication Lab

Art & Design 3D Fabrication Lab

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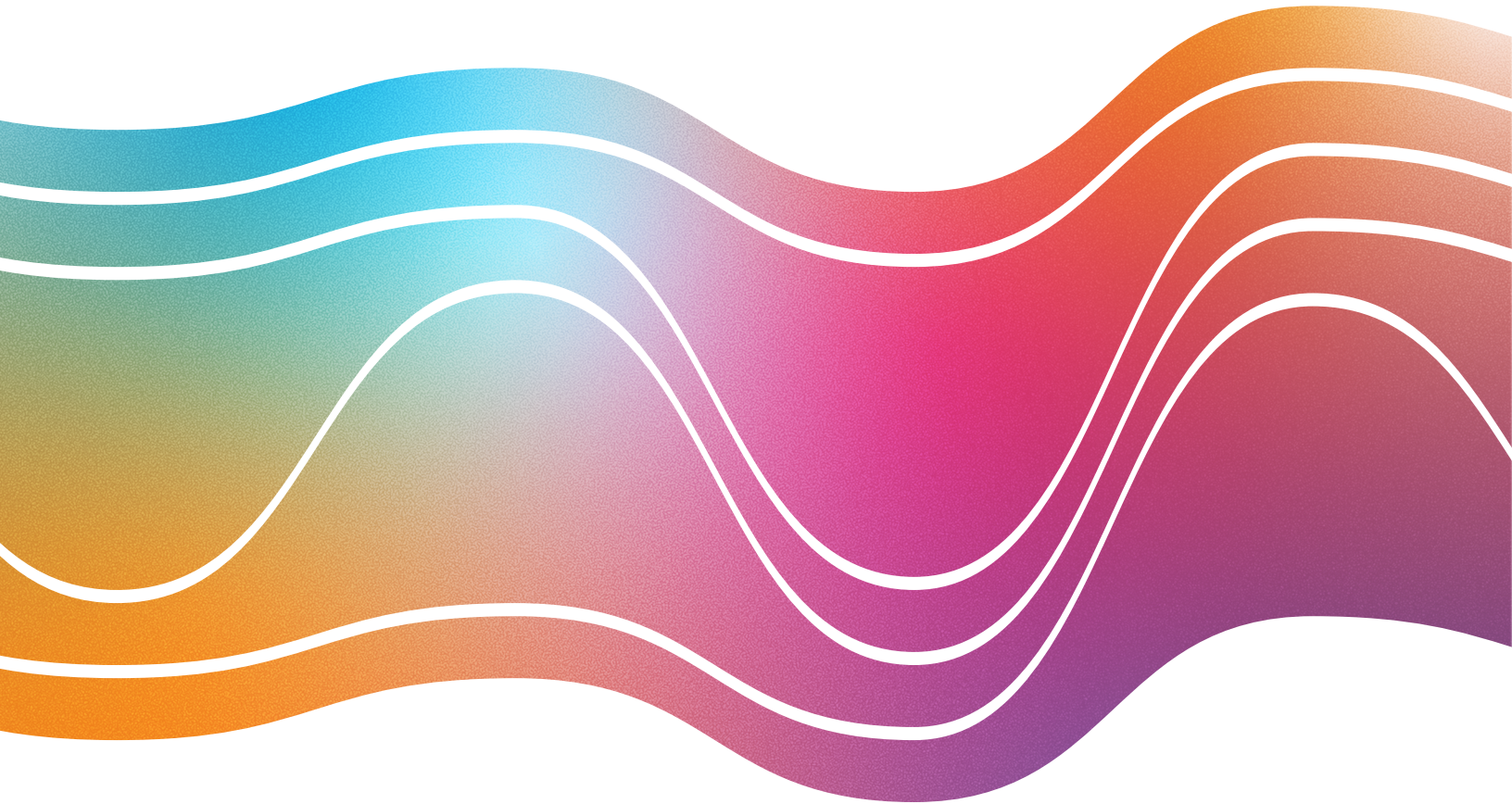
Multidisciplinary Collaboration Mural

Opening October 2021