

DIGITAL  
INNOVATION  
LAB

3D Scanning  
and Rendering  
Services



# DIGITAL INNOVATION LAB



## WORKING WITH THE DIGITAL INNOVATION LAB

Working with the lab offers a unique opportunity to connect, collaborate, and create in an innovative hub that improves access to digital experiences.

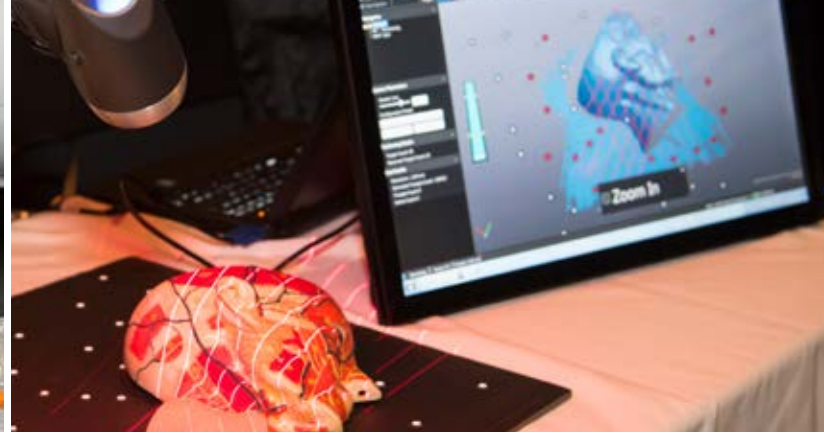
We provide the space, tools and specialized equipment to help you design, enhance, test and deploy your digital product against the highest standards in digital accessibility to address a wide variety of needs.

Above all,  
we provide  
**ACCESS**

**Access to an innovative space for 3D scanning, modeling, and rendering**

**Access to Ingenium's expertise, networks, audience, and unique collection of artifacts**

**Access to digital technology, AV suites, and advanced 3D scanning hardware that can quickly digitize large objects and spaces at a high level of fidelity and speed**



## REAL-WORLD APPLICATION: DIGITIZING FOR ADDED VALUE

High fidelity 3D modeling can help improve access to your audience.

- 1 Extend your market reach**  
Provide access beyond the confines of a physical space to anyone with an internet connection
- 2 Improve your audience's experience**  
Provide a point of entry with digitization for those with access needs
- 3 Enhance your brand**  
Design, enhance, test and deploy your digital product against the highest standards in digital accessibility



# DIGITAL INNOVATION LAB

## Research and Analysis

- Include in academic research publications
- Conduct touchless condition reporting
- Map out your space risk-free — including large-scale object moves (e.g. re-arrangement with a new artifact acquisition)
- Assess delicate objects such as an artifact that would otherwise be hazardous or too fragile to touch

## Education and Entertainment

- Re-purpose 3D objects or artifacts in games, storytelling, apps, exhibitions, websites — and more (Foundational digital library of resources is available)
- Create a more immersive online experience
- Put 3D printing into practice as part of an accessible learning experience in classrooms
- Utilize 3D models for risk-free research on fragile artifacts — without manipulating them

## Marketing and Advertising

- Digitize consumer-facing products into photorealistic models for digital marketing campaigns and e-commerce experiences
- Preview and share a prototype
- Build Out of Home augmented reality campaigns
- Enhance digital display ads with 3D objects to create a more eye-catching experience

## It all comes back to access.

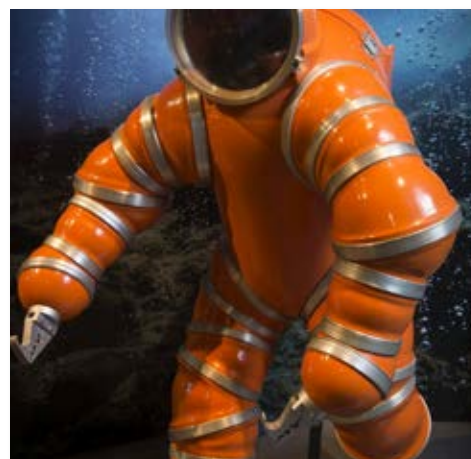
3D scanning entire spaces (like museum exhibitions, facilities, schools, shops, and more!) can open up the opportunity for advanced digital experiences that will allow audiences to “visit” almost any space from wherever they are.

## CASE STUDIES



### Skies of Fury

3D scanned artifacts can be inserted into gaming engines like Unity and Unreal to create interactive games using objects from history. This enables the use of collections in new ways to engage new audiences across online and gaming consoles.



### Newtsuit

Testing out animation and rigging with the Newtsuit at the Canada Science and Technology Museum. Rigging allows you to establish the location of joints in a model so that it can walk and move as it was meant to.



### 3D Model of the DT-3

The digital model allowed the conservation team to analyze without further destruction to the original, and the ability to make a mould.

## 3D SCANNING AND RENDERING SERVICES

All our scanning and rendering services are done in-house by trained staff with experience operating our 3D scanners and in post-production. Files can be saved in a 3D file format of your choosing (usually .obj or .stl) and shared via secure file transfer.

## OUR SCANNERS

### LEICA RTC360 3D LASER SCANNER



**FAST** — the Leica RTC360 laser scanner makes 3D reality capture faster than ever before. With a measuring rate of up to 2 million points per second and advanced HDR imaging system, the creation of coloured 3D point clouds can be completed in under two minutes.

**AGILE** — small and lightweight, the Leica RTC360 scanner's portable design and collapsible tripod mean it's compact enough to fit into most backpacks, ready to be taken anywhere. Once on-site, easy-to-use, one-button operation makes for fast, hassle-free scanning.

**PRECISE** — low noise data allows for better images, resulting in crisp, high-quality scans that are rich in detail and ready for use in a range of applications.

### ARTEC LEO



**MOBILE** — an all-new, cloud-connected, WiFi-enabled, and completely cable-free design lets you take Artec Leo's immense scanning capabilities wherever you need them without ever needing a computer. Take full control with a tilting, interactive screen that displays a real-time replica with color-coded cues to help you capture perfect scans, every time.

**VERSATILE** — with a 160,000 cm-cubed capture zone, Leo is truly versatile when it comes to size. It excels at capturing both medium-sized (20-50 cm) and large (50-200 cm) objects and surfaces.

**SIMPLE** — interactive real-time scanning hints, hybrid target-free tracking system, smart scanning modes for faster data processing — just a few things that make our Leo the easiest 3D scanner to use.



## ARTEC SPACE SPIDER

► **ACCURATE** — the Artec Spider is a high-resolution 3D scanner based on blue light technology. It is perfect for capturing small objects or intricate details of large objects in high resolution, with steadfast accuracy and brilliant color at 0.05 mm 3D point accuracy.

**FAST** — capturing up to 7.5 frames per second, high accuracy does not have to be time consuming. Artec Space Spider process up to one million points per second.

## PRICING

INCLUDING  
3D SCANNING  
AND POST-  
PRODUCTION

### SIZE OF OBJECT

#### SMALL

(mobile phones to small kitchen appliances)

### TIME

1 day or less

### PRICE

\$150 - \$1,000

#### MEDIUM

(snowmobiles to automobiles)

1 to 3 days

\$1,000 - \$3,000

#### LARGE

(boats, trains, and planes)

3+ days

\$5,000+

We offer a free consultation to determine pricing and timeline for your specific project.

# DIGITAL INNOVATION LAB

## ABOUT THE DIGITAL INNOVATION LAB

Unique in Canada, the Digital Innovation Lab connects national and international collaborators with Ingenium's user experience (UX), interpretive, and digital experts to develop digital accessibility solutions, methods and products to help improve access to museums spaces, collections, and experiences for all Canadians.



**For more information:**

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