

MadeMill

mademill.com

by prototypeD



FROM THE CEO



JANAK ALFORD, M.ARCH
CEO of prototypeD TEAM Inc.
Executive Director of MadeMill

WELCOME TO **MADEMILL**

Innovation is by no means a solitary activity. We have long since discovered that we are a stronger and smarter society when we share our thoughts, ideas and diverse skills. Any major feat, such as building a structure, harnessing the forces of nature or launching a rocket requires hundreds of different minds all working in conjunction with an aligned vision. As per the old saying “If you want to go fast, go alone. If you want to go far, go together.”

When taking on the challenge of launching and operating MadeMill, the Makerspace and Advanced Digital Media Lab at Bayview Yards in Ottawa, we knew that we needed to build a community of creative professionals who would be critical in moving ideas into reality. We also knew that Bayview Yards was a golden opportunity to support the diverse and creative community of designers and professionals already working across Canada. Working in conjunction with all of the partners at Bayview Yards, we knew that we were going to offer something that is unique and transformational.

Each project that we take on requires a broad spectrum of skills and individuals. This includes planning, project management, design, engineering, manufacturing, branding marketing, legal, logistics, software development, and financial planning. prototypeD curates a strong community of expertise to collaboratively solve these challenges while allowing our partners and clients to benefit from access to a wealth of resources at Bayview Yards.

The challenges facing our society are significant and require innovative means of working together. By leveraging our skills, emerging technologies, and growing this innovation network, we will take on important challenges including the creation of sustainable housing, clean energy, Internet of Things (IoT) devices, autonomous transportation, and medical devices to name just a few industries which we serve.

We look forward to working with you to make these opportunities a reality.

MEET THE PROTOTYPED TEAM

Janak Alford, B.Arch. Studies, M. Arch
CEO of prototypeD TEAM

Janak Alford is a 'Renaissance Man' of the modern era. A formally trained architectural designer with a Master of Architecture from Carleton University, he is a prolific designer, project manager, builder and developer. He constantly pushes creative boundaries by integrating his extensive knowledge of computer software, networks, 3D design, databases, and technology. Janak holds great reverence for the natural environment, and has a passion for self-learning, innovation, and solving problems facing diverse populations in Canada.

Justin Holness
Digital Media Director

Justin Holness is a musician, producer, youth coach and entrepreneur whose heritage bridges Jamaica and the Nakota First Nation. Justin has performed at many prestigious events including a collaboration with the Jamaican Youth Orchestra during their Canadian Tour. Most recently, he made history for being the first artist to 'drop a verse' in The Senate of Canada on National Aboriginal Day 2016. Justin is also the founder of Un1ty Entertainment which provides a creative environment for indigenous people to express themselves and their heritage through all forms of art, music, and fashion.

Mark Kaluski, CPA
Business Development Consultant

Mark Kaluski is a CPA, business development consultant, entrepreneur and an active player in the Ottawa business network. Mark develops strategic initiatives around business development for prototypeD and works with our clients to map their way-forward strategy for continuous growth.

Jason Alford
Makerspace Director

Jason Alford is a mechanical enthusiast. The combination of years of experience in design and fabrication with a background in machine automation and software forms the foundation for his work at MadeMill. His interests span a wide range of technologies which include green transportation, renewable energy systems with a focus on wind turbines and solar electric, mechanical design and drafting, alternative housing and steam-hybrid drive systems. Jason received a diploma as a Wind Turbine Technician and Industrial Electrician from St. Lawrence College.

Komi Olaf, M.Arch.
Designer and Pod Coordinator

Over the past decade, Komi Olaf has become well known for his exploration of Afro futuristic concepts within the disciplines of visual arts and Spoken word poetry. Working in painting, performance and virtual reality, the often Utopian themes expressed have in common the artist's fascination with hybridity and the general intersectionality of culture, race, religion and gender through a technological lens.

OUR SERVICES

prototypeD offers a diverse set of services. We have served hundreds of clients across numerous sectors since our inception in 2011. As we expand, we are shifting our services to better support clean technology, sustainable development, and advanced manufacturing. We are also expanding into the creation of Canadian made products that leverage advanced manufacturing and local design.

Technology

- Web Development
- Mobile Applications
- Data Visualization
- Cloud Development
- Design for Manufacturing

Environmental Design

- Architectural Design
- Green Energy
- Mobile Buildings
- Sustainable Development
- Construction and Prefabrication

Advanced Manufacturing

- CNC Manufacturing
- 3D Printing
- Industrial Design
- Rapid Prototyping
- IoT / Hardware Development

Media

- Video and Photography
- Virtual Reality
- Interactive Media
- Graphic Design and Branding
- UIUX Design

OUR LOCATIONS

prototypeD continues to expand our services by leveraging traditional locations while harnessing digital communications to connect our team wherever we go. We are expanding our network out from Ottawa using our Innovation Pods to provide a sustainable platform for work and collaboration.

MadeMill

7 Bayview Road, Ottawa

prototypeD operates the 5,500 sq.ft. Makerspace and Advanced Digital Media Lab at the Innovation Centre at Bayview Yards.

From this facility, we operate an extensive set of digital media equipment, CNC machines, and 3D printers.

Gallipeau Centre

Smiths Falls, Ontario

prototypeD operates a manufacturing bay in Smiths Falls where we construct the frames for our Innovation Pods and our solar energy systems. We continue to leverage our regional facility to advance sustainable development and green innovation.

Innovation Pods

Ottawa

prototypeD operates several Innovation Pods, mobile solar-powered buildings, that serve as our outreach into communities across Canada.

Innovation Pods allow us to extend our services and workshops out into the community and deliver design services to support communities, entrepreneurs, and social innovators.

OUR RATES

Our operations are designed to create maximum accessibility while achieving sustainability. Because our team works collaboratively, we offer our services at a blended rate of:

\$95/HOUR

EQUIPMENT RATES

Select pieces of equipment are accessible at their own hour rate to cover operating, overhead, and material consumption as applicable. These rates allow us to sustainably make advanced manufacturing and digital media accessible to the public.

Equipment	Rate
OMAX Waterjet Cutter	\$70 / hr
XYZ 3 Axis CNC (5'x10')	\$30 / hr
Stratasys Fortus 450 3D Printer (includes filament)	\$30 / hr
Tinkerine Ditto 3D Printer (includes filament)	\$2 / hr
Matterport 3D Camera (including 1 year hosting)	\$45 / scan
BlackMagic Ursa Mini 4.6k Production Camera (and gear)	\$50 / hr

Additional equipment fees are also applicable. Third party disbursements including cloud services and access to other equipment or facilities are also applicable.

INNOVATI.CA CONSULTANT RATES

Our Innovati.ca service partners set their own service rates and when used on a project will be identified accordingly. A 15% project management fee applies to all consultant rates to cover coordination, project management and overhead.

If you are interested in joining our Innovati.ca designer network and joining MadeMill projects, please apply at innovati.ca/join/

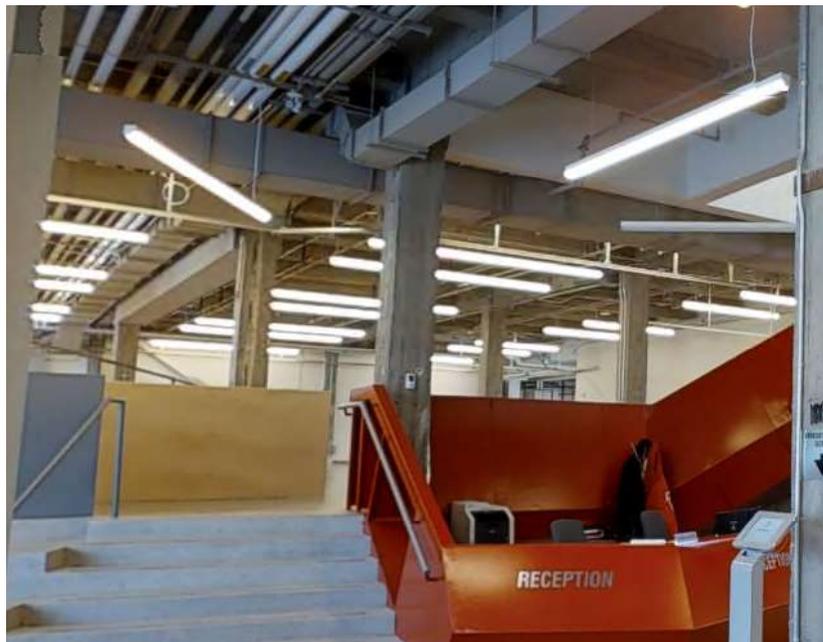
Note: Rates are subject to change without notice.

INTRODUCING **BAYVIEW YARDS**

Ottawa's premier Innovation Centre, accelerator, and one-stop destination to support Canadian Innovation.

Bayview Yards is a dynamic and energized hub that serves as basecamp for some of our greatest homegrown technology talent, capabilities and companies. It serves as Ottawa's ultimate one-stop business acceleration shop and 'mash-up' of technical, business and market services, resources and expertise that helps entrepreneurs and companies launch, grow and thrive, and compete with anyone in the world.

Bayview Yards is home to anchor tenant Invest Ottawa, which delivers its economic development programs from this new home, and works together with fellow academic, public and private sector program delivery partners to create rich multi-user destination for entrepreneurs and small-to-medium sized enterprises.



Bayview Yards is a 55,000 sq.ft. open concept incubator and accelerator

INTRODUCING MADEMILL

MadeMill is the Makerspace and Advanced Digital Media Lab at Bayview Yards operated by prototypeD TEAM Inc.

Our team of design professionals deliver products and services from our headquarters at Bayview Yards in Ottawa. MadeMill is funded in part by generous contribution by the FedDev Ontario program, the City of Ottawa and the Government of Ontario. Our mission is to make product creation and social innovation accessible, affordable, and above all connect the many services and resources necessary to move an idea into reality.

MadeMill is comprised of an industrial makerspace, which contains CNC mills, a waterjet cutter, standard mills and lathes, welding, carpentry, mould-making, and industrial 3D printing. It also hosts a 3D printing lab which provides a diverse array of 3D printing capabilities, electronics integrations and high-speed computing. The advanced digital media lab delivers Virtual Reality and Augmented Reality, videography, motion capture, and immersive media.



MadeMill is a 5,500 sq.ft. makerspace, 3D print lab, and digital media lab



■
Between Digital Media and Manufacturing we can design, build, and tell the story of your innovative product.

HOW WE WORK

prototypeD works with you to move your ideas forward. We are just one stop on a long path from concept to commercial reality for product development, but we align with our partners at Bayview Yards to deliver a key set of services and capabilities.

To make this possible and to ensure a common understanding of the development process, prototypeD has created the Prototype Development Life Cycle to show how this engagement occurs.

Working with our team, you select the services you need and we support the project with the right skills, rates, and services to get you where you need to be. You will get the best combination of speed, cost-effectiveness and quality.

1. Connect with the prototypeD team in person or through MadeMill.com
2. Build your plan on Innovati.ca through our planning tool. This will give you a live estimate that you can refine into a quote rapidly and easily.
3. Review and sign legal agreements protecting you, your intellectual property, and prototypeD. This lays the ground rules for us working together.
4. Get started on your project with a MadeMill Session. You get dedicated time with the entire project team to work through all the steps.
5. Iterate through the Design, Media, and Quality Assurances processes as demonstrated in our prototype development lifecycle (PDLC) to ensure you are getting what you've wanted and what you need.
6. Complete the project and move onto the next phase with our partners to scale your project to the world stage.

PROTOTYPE DEVELOPMENT LIFE CYCLE (PDLC)

PROJECT INTAKE
A project opportunity is identified and registered on Innovatica or at Mademill

PROJECT CLOSEOUT

Project is completed. Physical and digital materials are handed over to client. Project assessments of team are completed. Lessons learned are documented for future projects.

COSTING AND TIMEFRAME

prototypeD prepares the quote for the client and schedules the project team. Client accepts both cost and timeline.

PLANNING, OPTIONS ANALYSIS AND ASSIGNMENT

The project is scoped and planned with the client. Innovatica members are invited to prepare estimates and timelines. prototypeD selects the project team based on cost, time, and best fit.

TESTING AND QUALITY ASSURANCE

Testing is performed against project planned outcomes. Client reviews outcomes and completes acceptance testing. Revisions are completed as required.

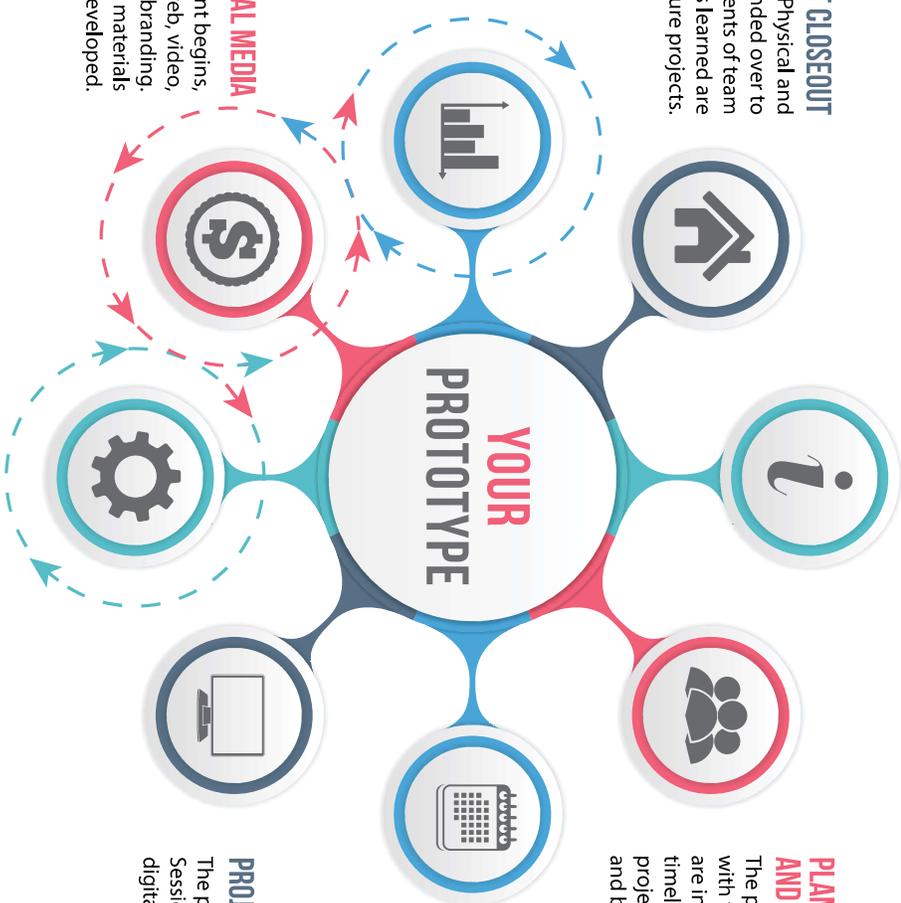
MARKETING AND DIGITAL MEDIA

Digital media development begins, including 3D renders, web, video, virtual reality, and branding. Showcase and marketing materials are developed.

DESIGN AND DEVELOPMENT

Design and development begins, including concept, prototyping, refinements, testing, and options analysis. Project takes form.

Design, Digital Media, and Testing are often an iterative process. Projects which require extensive prototyping or R&D will move through this phase several times throughout the PDLC.



KEY SKILLS AND SERVICES

Our prototypeD team works with a large network of design professionals. Here are just some of our services.

PrototypeD's multi-disciplinary approach stems from the fact that nearly all projects require a vast cross-section of skills and capabilities. We have long-since discovered that our value comes from our diverse skill-sets that are driven by passion and formal education. We work with driven individuals who have a passion for creativity, collaboration, and a willingness to learn and apply new skills.

Advanced Manufacturing

- CNC / CAM Operation
- Component Integration
- Electronics Design
- Engineering
- Fabrication
- Industrial Design / 3D Printing
- Machining
- Mechanical Design

Art

- Dance
- Fashion
- Painting
- Spoken Word
- Writing
- Music Performance

Construction

- Architectural Design
- Engineering
- General Construction
- Fabrication

Customer Service

- Customer Relations
- Presentations
- Social Media
- Translation
- Conflict Resolution

Digital Media

- 3D Design
- 3D Rendering and Animation
- Audio Production
- Event Production
- Game / Storyboard Development
- Graphic Design
- Photography
- Video Editing
- Videography
- Virtual Reality (Unity)

IM/IT

- Cloud Development
- Database Administration
- Hardware Development
- IoT Communications
- jQuery / Javascript Development
- Software Development
- User Interface Development (HTML)

Management

- Event Management
- Financial Planning
- Operations Management
- Project Management
- Proposal Writing
- Sales Development

Training

- Coaching
- Public Speaking
- Web Instructional Videos
- Workshops



The Innovatica MVP tool that we use for project planning.

INNOVATICA MVP

We're helping to make complex project planning simple by creating the Innovatica My Visual Planner (MVP) tool.

Innovatica MVP allows us to rapidly design, cost, and plan a new project within just a few minutes. Your skills and capabilities feed this tool and help us to educate our clients about the diverse skills, resources, and capabilities that we offer.

MVP is in Beta mode and will continue to evolve to add live-time cost estimation, educational videos, and links to our network's diverse portfolio of past projects.

prototypeD uses this tool to create work plans that feed into estimates and proposals. You can go from concept to plan in just a few minutes and get started to make it a reality.



The touch interface will be expanded to kiosks throughout the city and Canada to make innovation and collaboration easy.



The Prototype innovation Program provides a credit for students and non-profits to gain access to critical resources to assist in early stage prototyping and commercialization.

PROTOTYPE INNOVATION PROGRAM

As part of our FedDev Ontario funding, prototypeD is pleased to make available a credit for our services which is oriented toward making innovation accessible for students, social enterprises, and businesses which are partnered to support students.

The Prototype Innovation Program (PIP) provides a credit to selected post-secondary institutions, non-profit accelerators and facilitators, and directly to businesses and students working collaboratively on projects.

Annually each partner is credited with \$15,000 and has the flexibility to identify end recipients on a best-fit basis following **their** internal governance model. prototypeD facilitates this process helping to map recipients to ensure alignment within our capabilities and by facilitating a best-fit and costing for services.

This credit covers up to 100% (at our partner's discretion) of our costs for labour, materials, and equipment operation overhead. PIP does not cover 3rd party costs, end recipient salaries, or other disbursements.

Planning your project is simple.

1. Prepare a brief description of your project including a description of the deliverables you require and milestones you wish to achieve.
2. Estimate your costs using our Innovati.ca MVP tool or talk to a member of the prototypeD team.
3. Get approval in principle from the funding partner to ensure alignment with their vision and mandate.
4. prototypeD then creates a fixed price contract and service plan which may be paid from the PIP credits. Any costs that go beyond the available credits are the responsibility of the end recipient.
5. prototypeD works with the end recipient to complete their project within the identified time period and cost. Once complete, we update our partners with the outcomes and their balance of remaining credits. Any changes to scope are made clear to our partners and end recipients.

Note: Unused PIP credits will be subject to cancellation or reallocation between our partners at prototypeD's sole discretion. Some restrictions apply. Credits have no cash value and must be used within the timeframes specified.



■ Our MadeMill workshops provide an opportunity for hands-on interactive learning and collaboration. Aimed at developing capacity for individuals and introducing businesses to new capabilities, these workshops are offered at 7 Bayview Road as well as in the community via our Innovation Pods.

WORKSHOPS

MadeMill's facilities will offer a variety of workshops on a rotational schedule. These workshops are intended to build capacity in design and manufacturing while introducing individuals and businesses to new capabilities and opportunities.

Our workshops are offered by our staff and partners, as well as the members of our Innovator in Residence Program. They provide an opportunity for a small and focused group to gain access to knowledgeable staff who are able to introduce topics, provide structured and hands-on learning, and assist with prototyping or facilitating with individual projects.

Workshops typically are structured quarterly however they may be requested by individuals or groups by contacting info@pd.team

Upcoming topics include:

3D Printing

- Introduction to 3D Printing (Tinkerines)
- Intermediate 3D Printing (Fortus)
- 3D Printing for Mould Creation

Unity VR Game Creation

- Custom game environments
- VR interactive interfaces

Prototyping / Open Hardware

- Arduino prototyping and sensors

4k Video Production

- Blackmagic Ursa 4.6k production
- Premiere / Resolve editing (4k work flows)

OMAX Waterjet / XYZ CNC

- Introduction and experimentation

Cloud and Cognitive Computing

- Introduction to custom cloud

INNOVATION PODS

Our Innovation Pods are solar-powered mobile buildings. They can be utilized as tiny homes, mobile offices, stores, and shelters. We are building Innovation Pods to extend our operations into the Ottawa community and across Canada.

Greenhouse Pod

Our first Greenhouse Pod is a 10'x'10'x10' mobile building which extends its growing with a seasonal flat roof that features additional planters. The Greenhouse Pod has two full walls of glass and two insulated walls of traditional framing.



Digital Media Pod

Our second Pod is a Digital Media Studio which is 28'x10.5'x13' and features 12 solar panels, a 20 kW/h battery capacity, a sound studio, and working capacity for 6-10 people. This pod features our first 'Arc' model which is intended for all Canadian and international environments.



Generation.House

Our third Pod is a 'coach house' pod which is a segmented modular system and will offer a 550sq.ft. footprint, solar power, a large living area, bedroom, kitchen and washroom.

