



# ES Design

Elite Studio Design

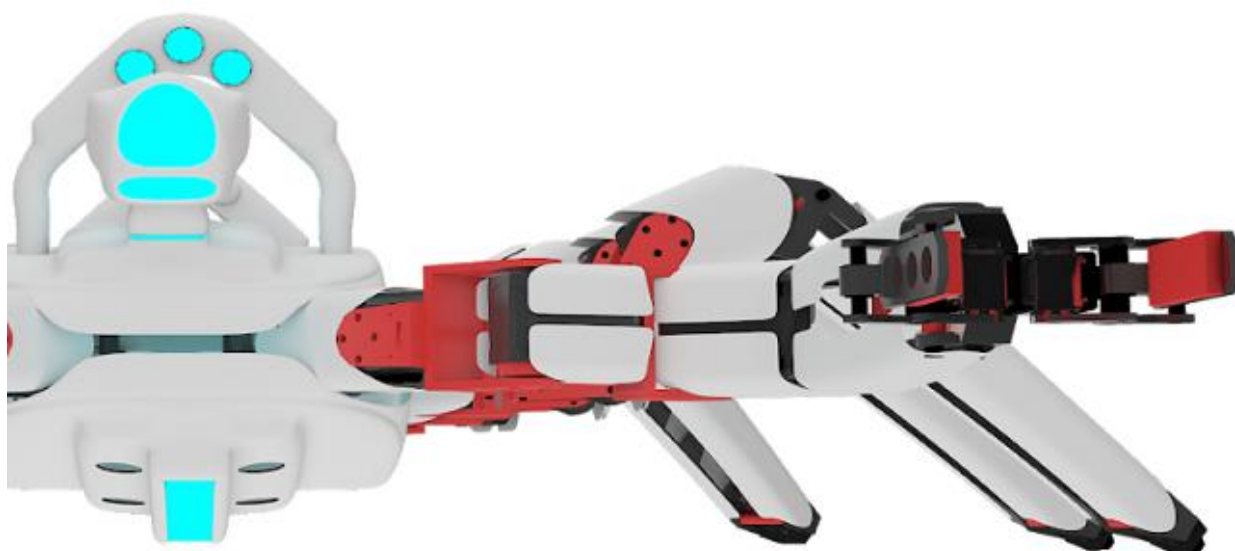
Elite Studio Design, Toronto Canada



# Heron Community for Mass Robotics

*A Citizen Science Worldwide Community*

*“What happens when scientific big open data  
turns accessible to local communities ?”*

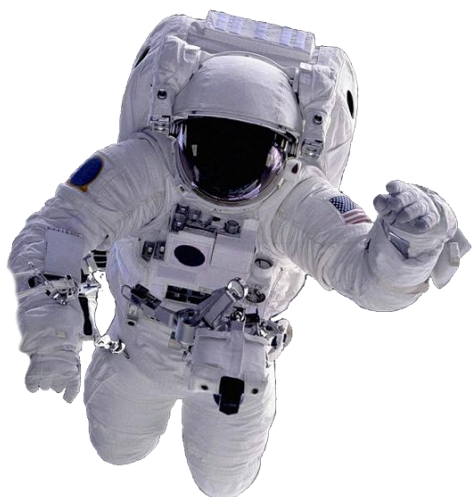




*“Governments are looking to space as the next frontier”*

*“Companies are looking to space as the next frontier”*

*“Citizens are looking to space as the next frontier,  
reason why space should be accessible to citizens”*



*Useless to say, space exploration is unbelievably exciting and challenging.*

*It is the next frontier.*

*The mission of Heron Community for Mass Robotics is to ensure its members gain a better understanding of the importance and potential of space economy. By designing, building and testing robots specifically designed for space economy like planetary and lunar exploration, Heron Community for Mass Robotics will be able to compete, once gathered the most brilliant minds, in space engineering competitions around the world.*

*Our true passion is manned and unmanned space exploration.*

*Our vision will always be oriented to a eco sustainable economic model, seriously focused on energy and material resources which are extremely limited.*

*For this reason our sustainable economic model for mass robotics will be designed and adapted in order to play a useful role.*

*For us, the sky is not the limit – it's only an interface between the Earth and Space.*

*Join us and jump on on this stellar adventure !*



*Joseph Caristena  
President of  
Heron Community for Mass Robotics*



# Vision

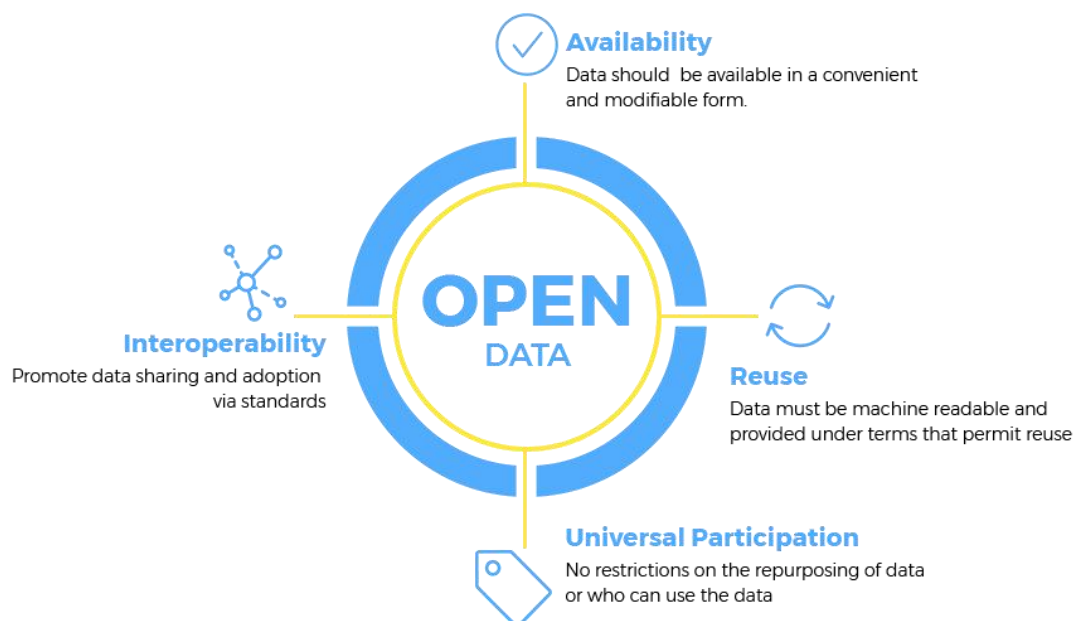
In nature an ecosystem can not survive without insects.

That said our team believes that a digital backbone architecture considered as a “Smart Ecosystem” can never survive without robots and in particular with tiny robots (small like insects).

We see mass robotics as the next shifting paradigm of the 21<sup>st</sup> century.

By designing and developing an open source and open platform, we aim to generate useful open data for the emerging mass robotics sector.

Open Data is a key asset of the digital economy.





**The “Open Data” generated and released by the “Heron Community for Mass Robotics”, during the beta stage of each project, will be for all members:**

**Available:** the data should be in whole, with no costs apart from reproduction fees;

**Accessible:** the data should be provided in a convenient form that can be modified;

**Reusable:** the data can be used in other projects;

**Redistributable:** the data can be combined with data from other projects;

**Comparable and Interoperable:** Data has a multiplier effect. The more quality datasets you have access to, and the easier it is for them to talk to each other, the more potential value you can get from them. Commonly-agreed data standards play a crucial role in making this happen.

**Unrestricted:** all members of the “Heron Community for Mass Robotics” can use, modify, and share the data, regardless of how they use the data (e.g. for commercial, non-commercial, or educational purposes).

**For Inclusive Development and Innovation:** Open data can help trigger inclusive economic development. For example, greater access to data can make farming more efficient, or it can be used to tackle climate change. Finally, we often think of open data as just about improving performance, but there’s a whole universe out there of entrepreneurs making money with open data.



## Social Change Makers

The member of our community is a “Social Change Maker”.

Social Change Makers are always looking for opportunities to have a social impact on their local communities.

Social Change Makers are able to encourage collaboration, share expertise and explore local community solutions.

They are able to trigger the social impact on their neighbourhood.

They only have to believe it could happen and it will (for sure) happen.

Because a Social Change Maker is more creative, sensible and reactive than others.

The Social Change Maker will love to be inspired and to inspire others to actively shape their local community without expecting to be rewarded.



## High Tech Clusters

Sometimes local communities switch into high tech clusters.

Today, high tech clusters can be considered as digital holonic extensions of the “Information Society”.

The flexibility claimed by the next generation of scale production requires a deep, pervasive and persuasive modification of the whole value chain.

Overconnectivity and data flow management abilities targeted by Industry 4.0 paradigm enable the emergence of more flexible and reactive infrastructures, based on the real time cooperation of autonomous and connected entities in the decision making process.

A high tech cluster represents the starting point of an urban regeneration process of social and business dynamics containing a critical mass of the innovation factor.

This co-thinking space can encourage knowledge sharing and collaboration, drive competition and help to attract other anchor companies from around the world, elevating the attractiveness level of the district.

As a result, high tech clusters have great potential to trigger the required social impact of innovation and empower competitiveness.





## About this project

Heron Community for Mass Robotics is an open source programme for a worldwide open community of enthusiasts devoted to mass robotics.

The programme was born in 2017 in the robot laboratory of ES Design, Toronto - Canada.

Joseph Caristena is the founder of “ES Design”, a Canadian company based in the new silicon valley of Toronto Canada called the “Corridor Tech”.

The development team is composed by Joseph Caristena (design, mechanics & software development) and Gil Formella (project management) .

The programme called “Heron Community for Mass Robotics” is connecting local communities around the world.

**One of the main targets of this programme is to empower local communities and avoid a new digital divide in the emerging sector of robotics.**

We think that all citizens around the world should be ready to handle the emerging challenges and opportunities coming from the field of robotics.

Heron Community for Mass Robotics is involved in many fields. Our worldwide dynamic and active local communities interact and react together instantly to design the best solutions to resolve the challenges of the 21<sup>st</sup> century.



## **“Rethink the way you think !”**

The target is to empower anyone in the world to successfully imagine and build a robot in a short time, cutting the value chain of 80% . This will be possible because all the members of the community will share their skills and experience, giving also H24 technical support, professional assistance and information exchange to other project leaders .

The prototype of “Heron v2020” , during each development and manufacturing stage, will have many spin-off versions for each worldwide local community.

The features and technical specifications of “Heron v2020” will be continuously adapted for each environment.

In other words, the original concept of “Heron v2020” can be considered as one biological entity with no registration, but with thousands of identities.

“Non Formal Education” , “Learning by Doing” , “Life Long Learning” are only some of the innovative empowerment approaches frequently used during the workshop activities.



## Timezones

The “Heron Community for Mass Robotics” has local communities all around the world and for this simple reason all the projects are managed by the members H24.

**“Timezones make the project  
always kicking and  
running and never stops”**

One of the best aspects of this worldwide community is that there are no inactive hours during the project management process.

The creative value chain of the manufacturing process is alive.

**The  
“Heron Community  
for Mass Robotics”  
is a community-centered  
robotic programme.**

Only a multidisciplinary community where researchers, teachers, policy makers, social change makers, artists, and robotic enthusiasts share their vision, ideas, skills, experience and obviously their precious time.



Each module of this programme is designed to be modular, easy to use, and easy to integrate – providing a set of building blocks that can be easily assembled and reconfigured continuously.

The “Heron Community for Mass Robotics” places the people’s imagination at the heart of the robotic development process.

Through its accessibility and its openness, this programme contributes to make future technologies more democratic and transparent.

## Partners

### BabaCAD

#### 3D CAD Software Partner

Each robotic project will be handled and managed on an online platform where many processes can be visible by all members like hardware and software selection process, the available and accessible technologies and solutions, the 3D engineering process and many others.

One of the best solutions of this online platform is a cutting edge software called “BabaCAD”.

This 3D software developed by our partner called Mirza Coralic has been specifically adapted to perfectly fit the “Heron Community for Mass Robotics” programme.

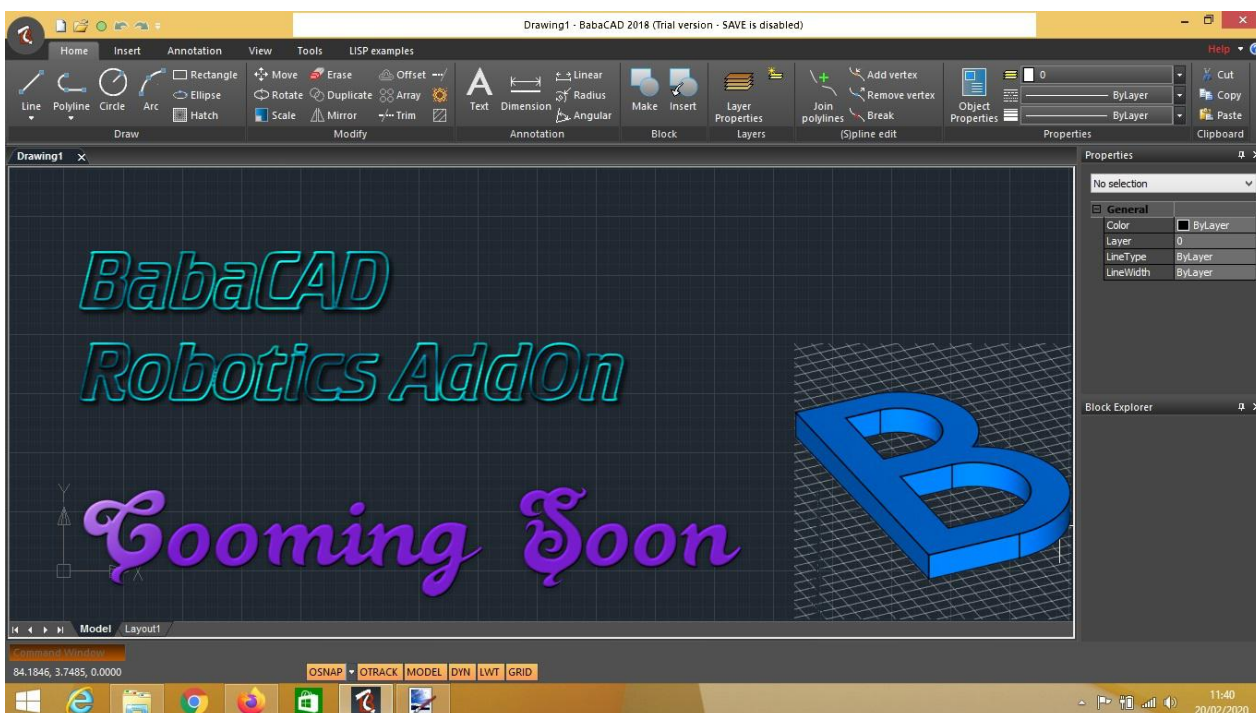


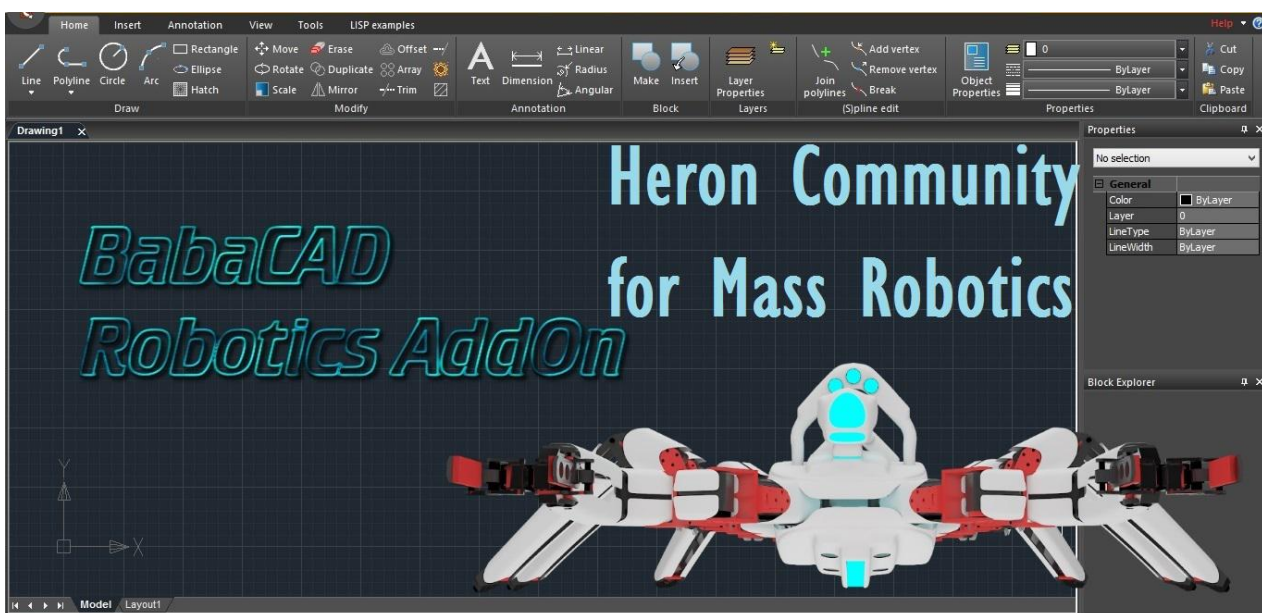
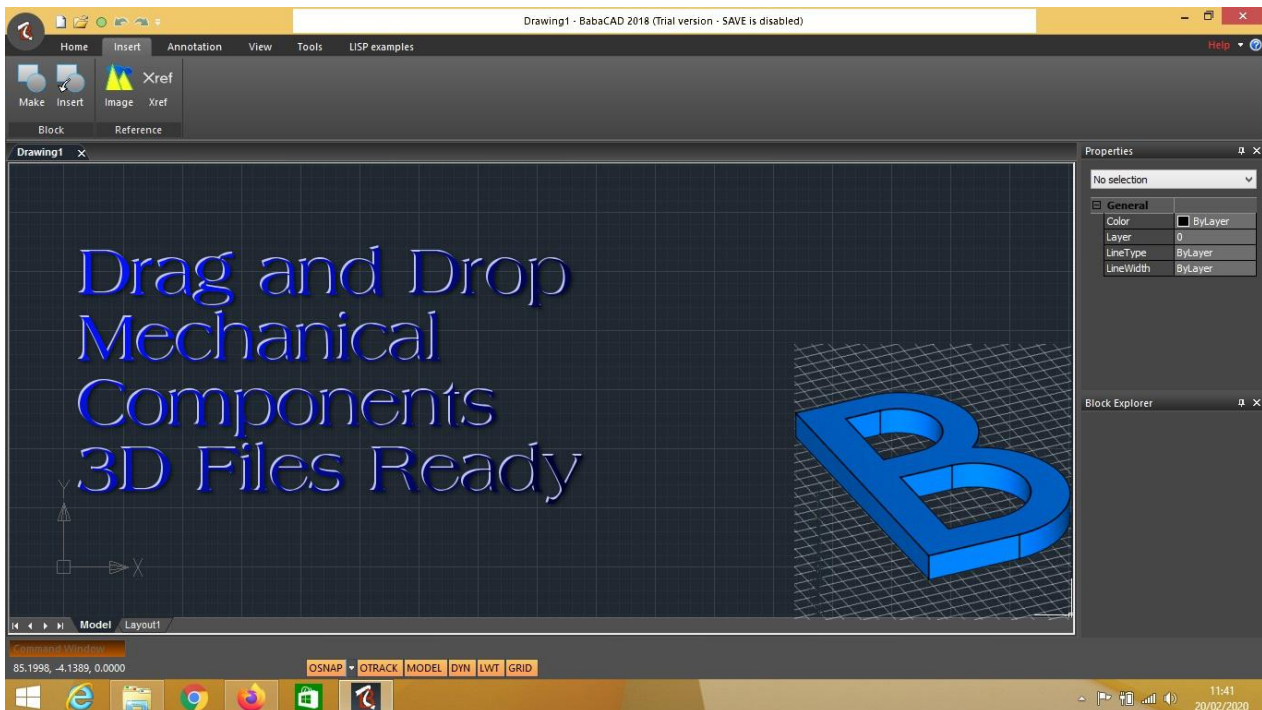
After a long development software process, Joseph Caristena and Mirza Coralic decided to launch for the “Heron Community of Mass Robotics”, a new version in beta stage of BabaCAD called “BabaCAD Robotics”

The BabaCAD Robotics version has been specifically designed for the “Heron Community for Mass Robotics” to accelerate the prototype stage of a robotic project.

# *BabaCAD*

## *Robotics AddOn*





*If you can imagine a robot, you will be able to build one.  
One day anyone will be able to build a robot and we want that  
day to come soon.*

*Joseph Caristena*





Needless to say, robotics is unbelievably exciting and challenging. The goal of “Heron Community for Mass Robotics” is to ensure its members gain a better understanding of the whole robotic process.

By imagining, designing, building, and testing robots , the “Heron Community for Mass Robotics” will be also able to compete in competitions around the world.

## Contribution

If you want to take part in the “Heron Community for Mass Robotics”, the first step is to become a member of the community.

It is a central place in the exchanges between users and contributors, where everyone is free to come talk about their projects and ideas.

There are many ways to contribute as the this programme involves a wide range of disciplines:

- Engineering fields such as computer science, mechanics, electronics, machine learning...
- Humanities such as cognitive science, psychology...
- Life science such as biology, biomechanics...
- Community management, scientific mediation, communication...
- Art, animation, design...

If you would like to contribute, you are very much welcome.



Apart from sharing your own project, you can take a look at the project source code , milestones, deliverables, workpackages and other outcomes.

Advanced users can of course create issues to notify a problem or develop new features that can be integrated to the projects.

## Usage rights

All the technological developments results, during the beta stage of each project, made in the programme are freely available under open source licenses.

Only the use of the name “Heron Community for Mass Robotics” is restricted and protected as an international trademark to protect its identity (patent pending) .

Also other names not yet mentioned can be restricted and protected as an international trademark to protect its identity (patent pending) .

## Conclusions

Join us to improve the user experience for the whole community and to get early access of all results of beta stage projects as coding, hardware, software and many other benefits, before their official commercial release on the marketplace.

Please feel free to contact us for more information.