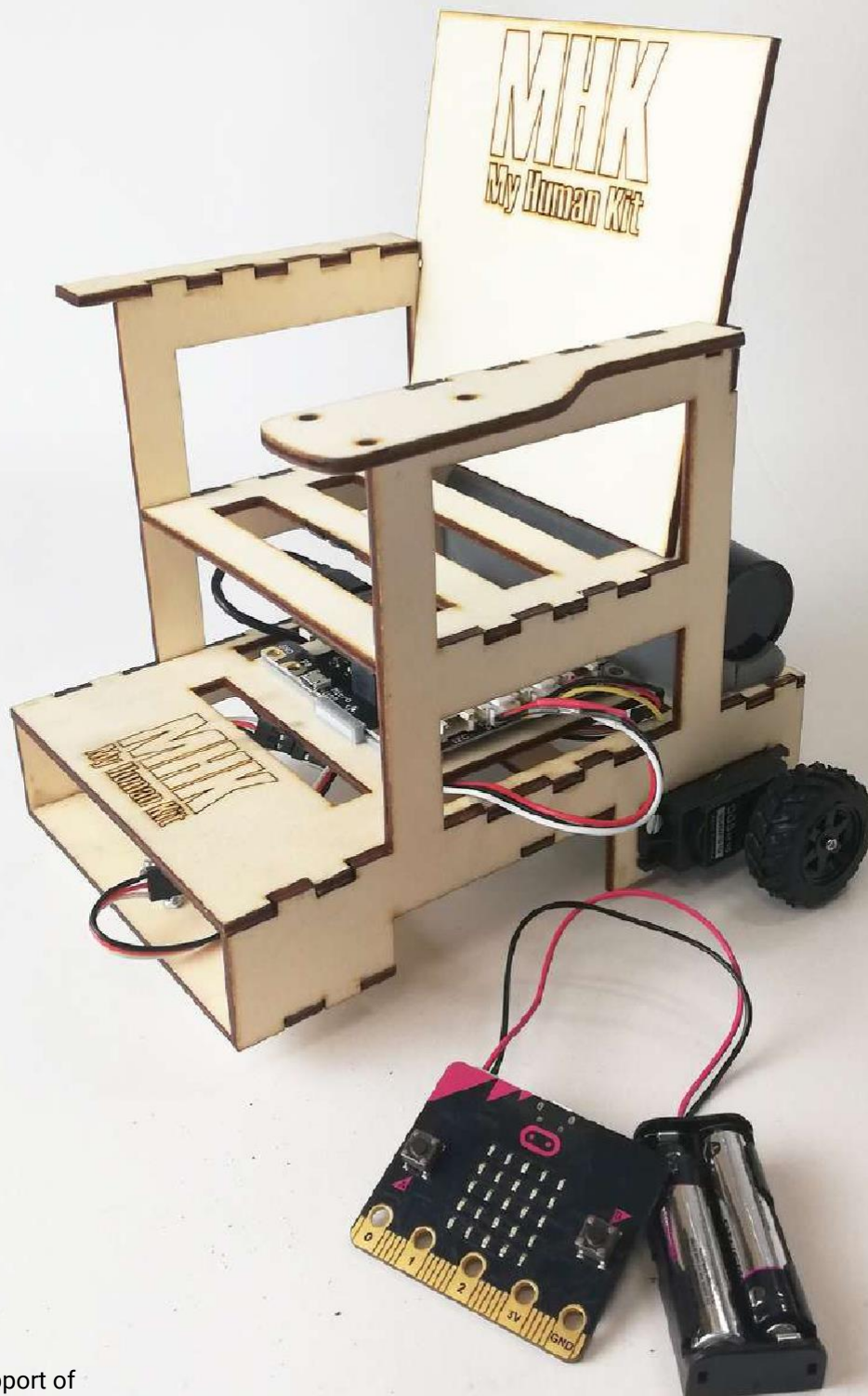


MY HUMAN KIT

2019 ACTIVITY REPORT



With the support of

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ENSEMBLE, HANDICAP ET SOCIÉTÉ

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EDITORIAL

Dear adherents,

I have to admit that I have dreamed of a utopian world. During long conversations, when I would leave for a trip in Utopia, there were always two situations that I feared. First, there was the moment I would realize that utopia for ones is not necessarily the same for others and the moment when, willy-nilly, we had to return to reality. It's clear that the real world is a bit more hostile than my good old Utopia and it seems to strive to make us suffer since the dawn of time, with the stubborn consistency of a quantum clock. I also realized that it became more and more difficult to handle the jet lag caused by my trips to Utopia. Then I said "Enough!", I'll consider changing the world another time.

The first thing to do to survive—in the absence of utopia—in "the real and hostile world" is to find shelter and a few fellow comrades if possible: on the ice sheet an igloo and Inuits, in the desert an Oasis and Tuaregs, on the beach a parasol and a churros seller.

Forgive me for this introduction that might seem inappropriate or to lack seriousness. However, it allows me to avoid dwelling too much and to go straight to the following conclusion: My Human Kit is an oasis. It's even its primary function. It's good to know that this oasis exists. If we can't protect the world from the wrath of men, I think that we can all agree that we can preserve this precious and salutary space that is My Human Kit. In fact, that's what we have been working towards for years now, with so much success that I sometimes wonder if our oasis would not simply be located in utopian territory.

Thanks to all.

Alexandre LOISON, Chairman

Key figures



Annual budget
456 000€



7.5 Equivalent
Full Time



2 564 mails received via
the contact box mail



42 Openlabs



35 adherents including
5 board members



40 technical support
projects started



232 songs
sang by DJ Nico

2019 HIGHLIGHTS

January



Lucie Le Guen joins the MHK team. The mission she accepted: animate inclusive digital fabrication groups in 3 middle schools in Ille-et-Vilaine, a French department.

February

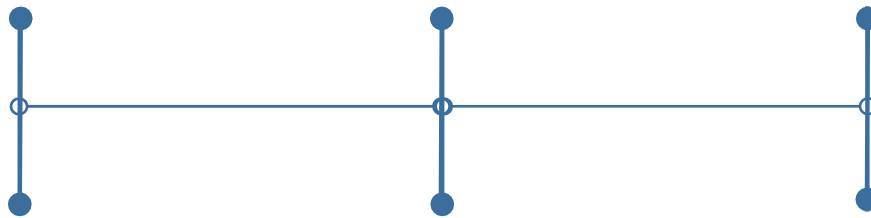


Nico went to Germany for the filming of the documentary "Regards handicap et high tech", an exchange of expertise between Fablabs, open-source projects and the creation of a heating muff to put on the stump.

March



Hugues Aubin left the MHK ship after ensuring its propulsion into hyper space. Charlie Dréano is taking over to maintain the ship in lunar orbit.



April



MHK is participating in the solidarity week organized by the Petite Lande middle school, which concludes by a solidarity run on Saturday.

Thanks to their endurance, the students and Bionico raised about 20 000€ for the Humanlab AFRICA project.

May



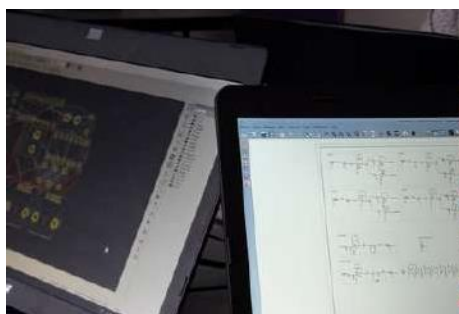
Jonathan (project initiator) gave a conference on his experience as a disabled player during the video game festival in Rennes. Mathilde, Christian, Nicolas and many others have also animated a stand to present the association's projects.

June



Nico was invited to a debate at the Tokyo University: "From the fixed man to the augmented man?". It was an opportunity to meet several persons in the Japanese capital and to bring back a lot of project ideas and collaborations.

July



Designing your own circuit board? Imagining adapted electronic designs? It is possible thanks to the Kicad software and to the Logic Gate pedagogy which allowed the skill development of the team and volunteers to grow.

August

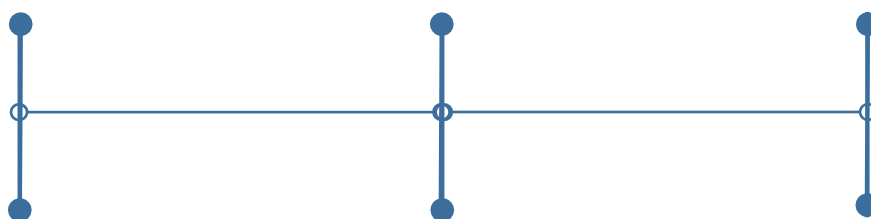


Some availability and Julien's detailed plans were the perfect mix for a reorganization of the Humanlab. Storage furniture, desks, accessible and adaptable consoles, and space organizations.

September



Pauline joins the MHK team as a partnership manager. Her first achievement? The inauguration of the APAJH 44 Humanlab at Rezé.



October



5 project initiators, 50 persons sorted into 5 teams involving the MHK community and collaborators from ArianeGroup for 3 days of prototyping technical aids for disabilities.

November



Top 3 of international video game show, the Paris Game Week is an annual event not to be missed. MHK was at the "Play As You Are" stall for 5 days to present adapted joysticks and other inventions.

December



After travelling hundreds of kilometers and spending a few weeks at customs, the equipment for our Humanlabs partners in West Africa is finally there! Yohann, logistics coordinator, can finally sleep soundly.

OUR PARTNERS ECOSYTEM

Public stakeholders

French Embassy in Japan
Departmental board of Loire-Atlantique
Departmental board of Ile-et-Vilaine
French Institute Paris
Judicial Protection of Juveniles (PJJ)
Rennes city and metropolis

Education

AMISEP IMEPrefaas
Bellevue middle school
Hautes-Ourmes middle school
Chalais middle school
Petite Lande middle school
Guipry school
La Maison des Enfants au Pays IME
Clarté's Institution for the Motor Skills Education

Companies and Foundations

ArianeGroup
BNP Paribas
Fondation Free
Fondation de France
Fondation JM Bruneau
Fondation La France s'Engage
Guarantee fund for Victims FGAO/FGTI
ARES Group
COVEA Group
IRCEM Group
Lab4i
Mastercard
Microsoft
OPR 35 - Orthèse Prothèse Rééducation
Orthopus
SLS France
SYGMOTIC
TLM Usinage Atlantique
U-Exis

Socio-professional integration

LADAPT Ile-et-Vilaine
AGEFIPH

Private individual

Researchers
Job seekers
Entrepreneurs
Students
Medical professionals
Retirees
Employees

Health

AMCSA - Medical Advisor Association
APAJH 44 - Association for Adults and Young
People with Disabilities of Loire-Atlantique
Mutual center of Kerpape
Hospital of Invalides
Saint-Hélier center
SAMSAPF 35 - Social Support Service

Disability Associations

AFM-Téléthon
APF France
AVC 35
E-nable
Handi Sport Rennes Club
Arm Japan mission
URAPEDA - Regional Union of Parents of
Hearing-Impaired Children Associations

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Hearing-Impaired Children Associations

Social and Solidarity Economy

Comme un Etabli
Envie Autonomie
IDLV - Indiens Dans La Ville
La Belle Déchette
La Petite Rennes
Seconde Vie Autonomie 53
UP La Manufacture des Utopies Partagées

Digital Mediation and Fablabs

Babylab
EduLab
E-Fabrik
HandiFabLab
Humanlab APAJH44
Humanlab Partage Innov Saint-Pierre
Humanlab UBO Open Factory
InteractiK
LaboCesson
Les Usines
Maker's Asylum foundation
Fablabs' French network
Senfablab
Utopie Maker
Wakatlab

Research

INRIA - National Institute for Research in Digital
Science and Technology
ISIR - Institut des Systèmes intelligents et de
Robotique

Cultural structures

Beaux Arts
Electroni(k)
Hôtel Pasteur
Le Triangle
Musée de l'Homme

Support structures

CCAH
Eclozr
Les Petites Rivières



HANDICAPOWERMEN: REVEAL, ENHANCE AND SHARE ABILITIES

Support and training: AGEFIPH project

The Association de Gestion du Fonds pour l'insertion des Personnes Handicapées (AGEFIPH) is a joint organization which helps people with disabilities to remain in employment. From 2016 to 2019, MHK carried out a joint action with the AGEFIPH to support beneficiaries of the employment obligations with disabilities through their inclusion journey.

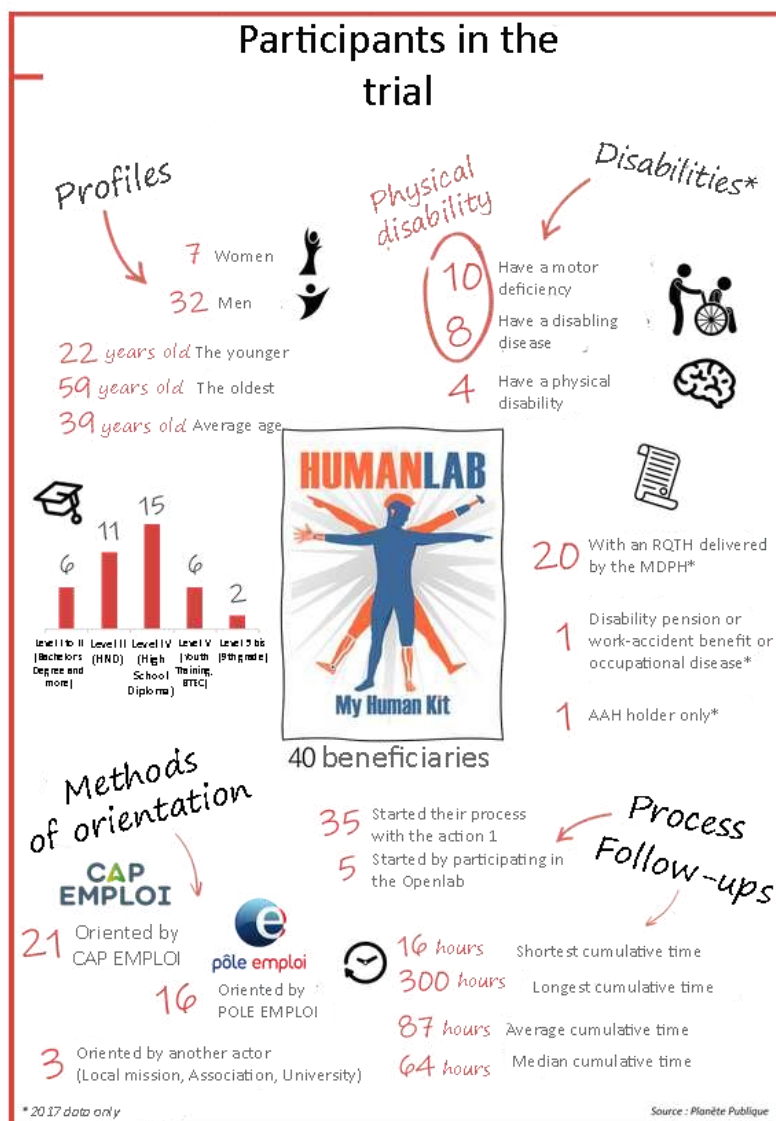
Main results of the evaluation

In 2019, a project that enabled the association to deploy new activities and skills (initiation to digital manufacturing, meeting with professionals, events) came to a conclusion and was evaluated.

The project evaluation was conducted in collaboration with the AGEFIPH which appointed two consulting firms:

- Planète Publique: Caroline Massot,
- The SociaLab: Sarah Maire.

The following infographic introduces the main quantitative and qualitative elements for people involved in the project.



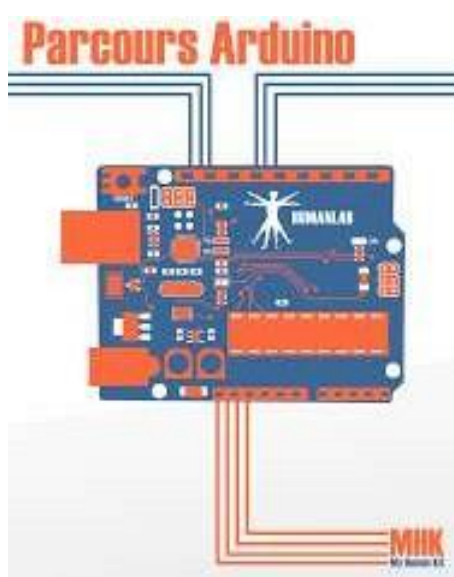
Here are some elements enhanced by evaluators following their interviews with the target audiences, MHK employees and project partners.

Positive elements:

- A place in the ecosystem whose relevance is confirmed by the project: a project that hasn't been implemented anywhere else and takes place between the different steps of the "traditional" support journey,
- A project that generates numerous positive effects for target audiences: dynamic of remobilization and skill acquisition,
- A project which enabled the financing of an innovative and agile "nonprofit project": a flexible financing to play along with the experimentation and MHK's ability to adjust the project along the way to optimize it, especially thanks to the team's commitment.

Regular elements:

- A project which struggled to connect to the local ecosystem: complicated mobilization of people and structures in charge of public prescription,
- Regarding individual path, a difficult connection to the "after": little support for people leaving the facility to encourage the verbalization of skill acquisition (technical or transversal),
- A project kept too confidential at the scale of the "employment-training-integration" ecosystem: difficulty to understand the project and no follow-up after the experimentation.



Discussions with the AGEFIPH about a potential follow-up continued throughout the year and different propositions have been considered. The evaluation committee's attention was drawn to the need to support the spreading out of the experiment to other territories.

At the beginning of 2019, a workshop was created within the Ping association in Nantes which demonstrates that the initiative can be duplicated and inspire other territories.

What we particularly remember is the effect on audiences. For many people, this project was a first step and a new state of mind concerning career path.

Beneficiaries' portraits



Jonathan

- 19 Openlabs
- 2 workshops (electronic and documentation) 2 complete process (3D discovery, Arduino discovery)
- ➔ MHK ambassador for events and conferences
- ➔ Expertise on appropriate interfaces
- ➔ Computer technician training

Gaël

- 26 Openlabs
- 1 printing and 3D modeling path
- ➔ Contributor on many MHK projects (gauntlet, hand prosthesis, Trotti)
- ➔ Facilitator of training time for volunteers (3D scan)
- ➔ Trust recovery and network development



Sébastien

- +30 Openlabs
- 1 printing and 3D modeling path
- ➔ Career change to Fabmanager job (carried out in 2019)
- ➔ Training time facilitator for volunteers (digital embroidery machine)
- ➔ Digital intermediary for MHK on national maker events stands

Social impact study

2019 was a year of evaluation as that's also when we chose to take a moment to look at the impact of our activity on people: are we really participating in a form of "Handicapowerment"? Which is to empower disabled people.

This evaluation, requested by the association's office and integrated into our commitments to the *Fondation la France s'Engage*, was carried out in collaboration with Amélie Tehel, PhD student in information and communication sciences at Rennes 2 University. This assessment was part of her thesis entitled: "(Re)Construire un corps hors-norme : perspective communicationnelle de la fabrication Do It Yourself de soi" (ReBuild an unconventional body: communication perspective of the do-it-yourself manufacturing of the self).

Amélie Tehel applied the following methodology: management of 12 semi-structured interviews between June and October 2019, based on an interview grid approved by My Human Kit. The interview grid included the lines of research defined in the impact assessment:

- Knowledge transfer and sharing,
- Isolation, socialization and self-esteem,
- Functional validation of the manufactured assistive technologies.

Knowledge transfer and sharing

75% state that they have gained and developed new skills and knowledge through carrying out their project. These skills range from gaining new technical knowledge in relation to digital manufacturing to strengthen their skills in more traditional techniques (e.g. mechanical techniques). Along with technical skills, the participants also say that they have improved their project management skills (how to write a statement of work, team management, organization).

The other 25% were interested in learning about digital manufacturing tools (especially 3D printing) but do not wish to improve their skills on to use these tools.

Process of socialization

100% of those interviewed say that this experience had a positive impact on them, on very different aspects such as:

- The actual manufacturing of the item improving their daily comfort or the practice of specific activities.
- Working on the project itself which enabled them to develop operational skills and get symbolic rewards (feel proud to do it by themselves, self-gratification, (re)build confidence in their abilities), but also increased their career prospects or involvement in voluntary organizations.
- The process of socialization within the Humanlab, through enabling people actively involved in disability issues to interact as well as creating dynamics of mutual understanding between non-disabled and disabled people.

Reliability of the assistive technology

100% of those interviewed say that the requested assistive technology was either not available on the market (the item does not exist or meet the technical requirements) or was unaffordable (it required a personal financial investment or to file an application for financial support with relevant authorities).

Over the 12 identified projects, 6 have proven to be functional and are used by the target users on a regular basis. 4 projects are still being finalized or adjusted.

Carrying out a first project seems to help spark new ideas on more ambitious projects, the design of new assistive technologies or the development of side projects (training, promotion of MHK model). 75% of people say that they have new ideas that they plan to implement, sooner or later.

Conclusion

This study highlights that My Human Kit has a key role in using the collaborative production of assistive technologies to foster learning and socialization: “Handicapowerment” does exist and we are implementing it. There are still some areas of improvement (work environment, prototype performance, learning environment) that we are looking to overcome.



Project leaders: MHK ambassadors

In 2019, volunteers, project leaders and employees worked several times on developing assistive technologies that would help play video games. Video games are very popular and there are many events and festivals. Nicolas Pousset and Jonathan Menir, both players and involved in making videogames more accessible, joined and represented MHK during these events.

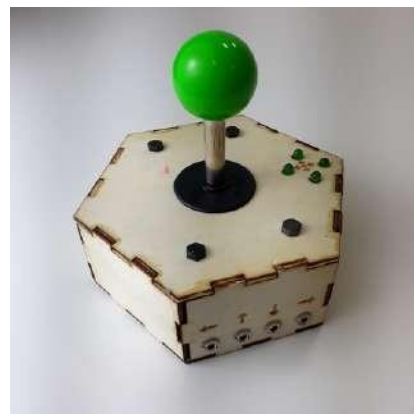
Paris Games Week

The Paris Game Week is the largest video game show in France and was held in October 2019. We were invited to join the “Play as you are” area, a dedicated space to promote accessibility projects. qui met en avant les projets d’accessibilité.

A great team to host the MHK space for a week: Nicolas Pousset, Julien and Nico.



They aimed to highlight the work of the organization as well as enabling both Nicolas (Huchet and Pousset) to become ambassadors of adapted game. All the controls manufactured at the Humanlab have something in common: they make it easier to trigger the button compared to traditional gamepads that tend to be too small and hard to reach.



Stunfest

We also took part in the Stunfest, a festival in Rennes, to promote and share our actions on a local level. This video game festival also had a space dedicated to accessibility. This was the opportunity for Jonathan Menir to highlight his low-pressure sensor and the adaptation of the B.A.S.I.C.A project, a device intended for people with disabilities to test different control interfaces.

Jonathan was able to show his talents as a player but also to lead a conference on accessible gaming and talk about his experience, his ideas and the value of working with MHK.



Humanlab, a third place to express their uniqueness: welcoming young people from Poligné's Special Needs School

Initiated in 2018 and validated in 2019, the partnership between the Special Needs School called "la Maison des Enfants au Pays" and My Human Kit was the bet of the meeting.

We wanted to offer young people with autism the opportunity to take part in a collective process of digital creation and manufacturing in a place where they can meet people and interact: the Humanlab.

By encouraging the mixing of audiences in third places, we were betting on:

- Promoting individual expression through digital manufacturing,
- Finding technical solutions based on their wishes and their desires,
- Suggest to young adults to create by themselves and for themselves,
- Promoting the learning of digital manufacturing techniques and vocabulary.

Therefore, small groups from two to three young adults are welcomed every Thursday morning at the Humanlab. A small collective introductory time is always organized in the morning to take stock of current projects or desires.

Week after week, coming to the Humanlab becomes an event awaited by the young people and both their technical and social skills improve significantly.

We also strengthen collaborations with the educational team of the Special Needs School so that the MHK team can have a better understanding of young people's behavior.

This partnership has enabled the organization to expand its activities and create a link between digital manufacturing and mental disability, while also showing that the Humanlab could be a place of openness and "outside the walls" learning.



Records from beneficiaries: “Why do I come to the Humanlab?”



Steeven

"The reason I come to the Fablab is to dismantle, repair, build..."

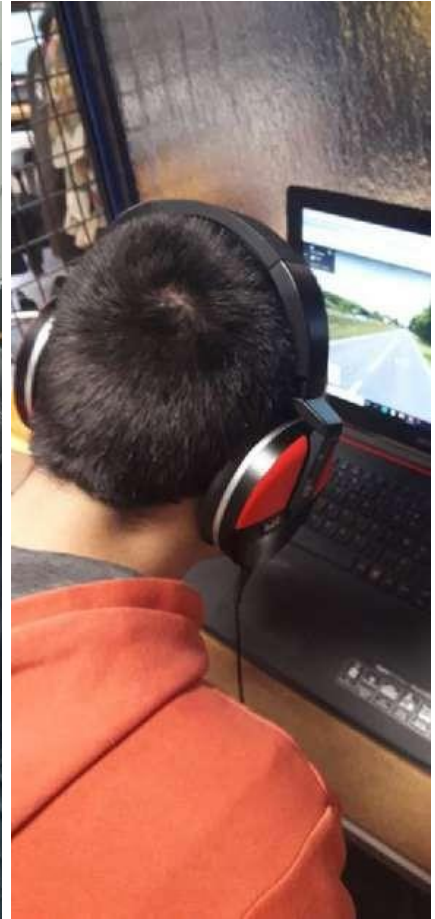
At the Humanlab, Steeven repairs damaged items and makes new items to connect with others. For example, he prints in 3D rings to be offered as a gift and he makes a music box to share his music.



Matteo

"I have to get the images out of my head and work on whatever project comes up."

To free himself from "his images", Matteo prints in 3D and carries out many projects in a unique way (Geode, CN Tower, Pont du Gard...). Matteo's modeling of the Geode shows that he's even able to model his items himself by using simple 3D modeling software.



Yoann

"...is to carry out my projects and meet people."

All by himself, Yoann uses digital tools and browses the web to prepare outings and activities: checking the weather, checking road conditions, planning the return to facility.

MAKING TECHNICAL AIDS TOGETHER

Places to manufacture and socialize

The Humanlab in Askoria, Rennes

Located within Askoria's premises since 2017, the Humanlab is My Human Kit's core activity. More than a workplace for the team and volunteers, the Humanlab is also a place that welcomes anyone who feels interested in our association.

In 2019:

- Nearly 1,800 persons have walked through the door of the Humanlab to learn about or participate in our activities,
- 46 openlabs have been run by employees and volunteers,
- 17 groups of professionals or students have come to meet us.



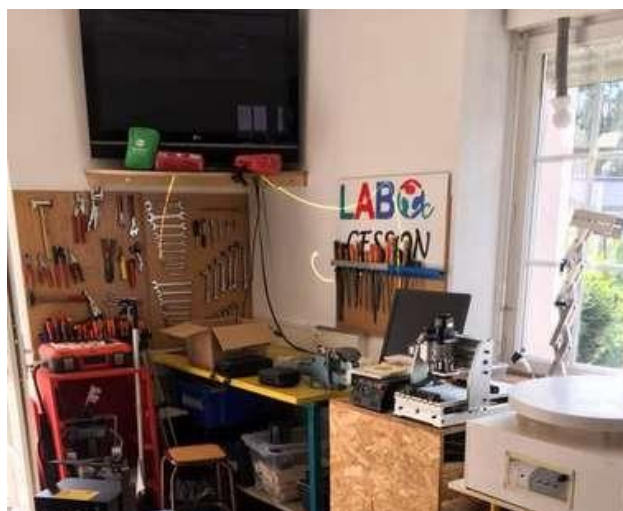
The Humanlab at Cesson-Sévigné

The LaboCesson organization has been running a Fablab at Cesson-Sévigné for several years, it has joined the Humanlabs network in 2018. My Human Kit has supported the rehabilitation and accessibility of the house that hosts LaboCesson's activities.

Thanks to this support, we have now access to a second place to:

- Increase manufacturing periods,
- anchor our activities in Rennes and its
- surroundings, get access to storage spaces.

The access to this new place made it possible to pursue a more global objective: strengthening the independence of volunteers and facilitate their work.



In 2019, 3 very involved volunteers (Gaël, Christian and Nicolas P) have thus become the points of contact for our activities at LaboCesson and have set up a second duty period for project leaders, every Tuesday from 2 P.M. to 5 P.M. Thanks to their involvement, MHK was able to maintain its activities during the months of July and August.



The Farm of La Harpe, Rennes

The Farm of La Harpe, which is managed by the association 3 Regards, became a local partner for MHK in 2019. The implementation of technical mobility assistance requires us to do frequent welding, metalwork and frame construction. The different workshops present at the Farm of La Harpe are regularly made available to us. A few steps away from the Humanlab, this space allows us to respond to more requests without investing in new machines.

Many thanks to Marc, who regularly opens the doors of this place to us and shares his knowledge with us.



Diverse, collaborative and need-based achievements

Nearly 40 technical aids have begun or continued to be developed in 2019. All of them are accessible on the association's Wikilab. Below are 10 examples that show the diversity of our works, as well as the places where we produce them.



Project: Kitchen Aid

Need:

Sarah lives in her own house and has to arrange her space in order to move around and perform everyday tasks with her wheelchair. She wants to set up a table on which she could install food dispensers (rice, pasta, etc.) so she could serve herself.

Production:

Installation of dispensers on a kitchen table and setting up of the table so that the height can be adjusted.

Project team: Sarah, her personal carer and Yohann

Status of the project: Finished

Project: Gantelet

Need:

Solène has a hand agenesis. Her need: a system to compensate the gripping of her hand. The idea is to develop a multi-functional glove to allow her to grab and use different objects.

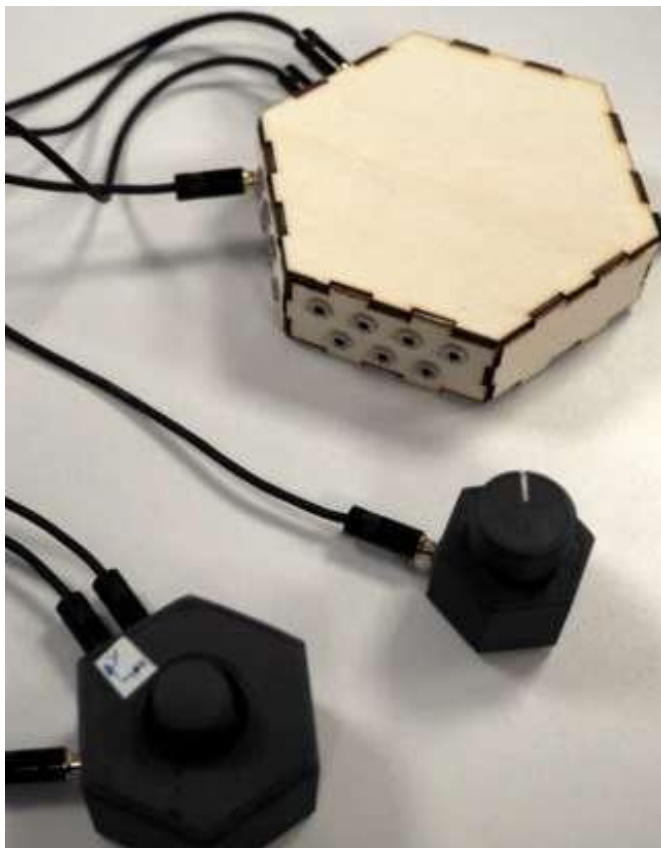
Production :

A strong and lightweight device and with a fixing system created to be as universal as possible.

Project team: Solène, Yves, Gaël, Delphine, ArianeGroup employees

Status of the project: Finished





Project: Open Adaptative Controller

Need:

A project that is applicable for different uses and especially wanted by Nicolas and Jonathan. The idea is to be able to adapt your gamepad according to your abilities, desires and needs.

Production:

After a lot of thought, a bit of designing and being freely inspired by the Microsoft's Xbox Adaptive Controller (XAC) here we are with a control interface in which we can plug all kinds of commands adapted to the abilities of each one (low pressure sensor, pedal, big button, etc.).

Project team: Julien, Nicolas, Nico, Jonathan, Lucie

Status of the project: Finished

Project: Lightsaber

Need:

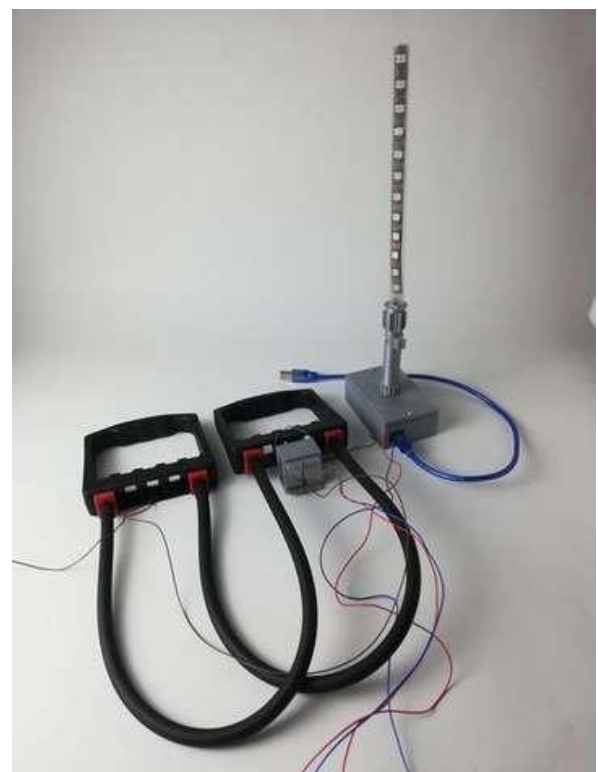
Sacha is a young Star Wars fan from the IME (French equivalent of a special school) La Clarté. He participates in the digital workshops led by Lucie. In order to refocus in class, his psychomotor therapist advised him to do some physical exercises with a chest expander (muscle-development tool).

Production:

Lucie accompanied the 8th graders so that they could add to the chest expander a system that activates a lightsaber-like light every time Sacha exercises so it makes them playful.

Project team: Lucie, Marie-Claire (teacher at the IME) and the students of the Secondary School of Bellevue in Redon

Status of the project: Finished





Project: Shiva

Need:

This project is a common thread in the history of My Human Kit, it consists in designing so-called "aesthetic" (i.e. non-mechanized) hands in an inexpensive and easily reproducible way.



Production:

This time we have chosen to work on it with two 8th grade classes from the Secondary School Les Hautes-Ourmes. Nico introduced himself as a disabled project leader to tell secondary school students about his needs and desires regarding prostheses. Two ideas were developed: hands for his show "One Man Chot" and "tool" hands.



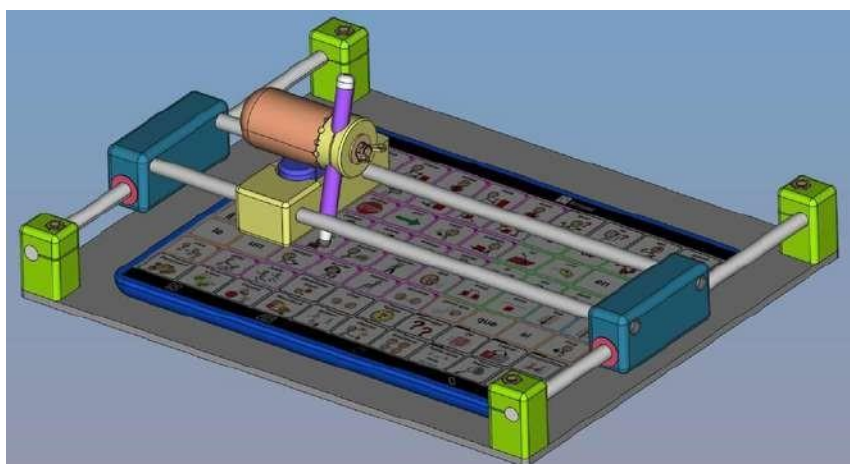
Project team: A Visual Arts teacher, Nico, Lucie and 8th grade classes from the Secondary School Les Hautes-Ourmes.

Status of the project: Finished

Project: Tablet stylus

Need:

Léona has a motor disability and cannot express herself verbally. She must therefore be able to click on icons displayed on a tablet screen in order to communicate with those around her.



Production:

To make up for her difficulty of holding a stylus directly, we add on a handle so that it's easier to hold. The positioning of the stylus above the desired icon is facilitated by a system of sliding carriages on cylindrical rails. In summary, a stylus guide to facilitate the use of her tablet.

Project team: Yves and Delphine

Status of the project: In progress



Project: Tricycle électrique

Need:

Lila has a very beautiful bike but her muscular deficiency related to her handicap limits her use of it. Thanks to the partnership with La Petite Rennes and Kéolis, MHK is developing an expertise about electric mobility. Lila wanted to keep her bike but make it easier to use thanks to an electric battery and an acceleration handle.

Production:

Installation of a motorized wheel and battery on the bike, all connected to an acceleration handle set at a speed adapted to her need.

Project team: Lila, Florian, Gaël, Dédé and Yohann

Status of the project: Finished

Project: Trotti V3

Need:

The Trotti project has been a central theme of our activities since 2017. It started with a scooter fixed to a wheelchair, and here we are, in 2019, with a frame perfectly adapted to the Guillaume's wheelchair. The need is still the same: a front-wheel drive to facilitate long and exhausting journeys.

Production:

Adjustment of fasteners and design to the wheelchair frame.

Project team: Guillaume, Dédé, Julien and Yohann

Status of the project: Finished





Project: Wi-cane

Need:

The Wi-cane is a follow-up to the Sonar Glove project developed in 2018. It aims to create an improved "white cane" for people with visual impairments.

Production:

The Wi-cane provides information about ground reliefs and the surrounding environment to facilitate movements. A signal (sound or vibration) indicates obstacles perceived by the onboard sensors.

Project team: François, Yves, ArianeGroup employees, Lucie

Status of the project: In progress

Project: Vespacé

Need:

Adamou, fabmanager of the Humanlab in the University of Brest, contracted poliomyelitis at the age of 4. He has been wearing a prosthesis on his left leg since he was 9 years old, and since recently a knee support on his right leg. He therefore finds it difficult to move around and is looking for a low-priced solution.

Production:

A kind of electric scooter with three or four wheels made from recycled material to facilitate daily movements. Adamou, an active member of the *Société des Ambianceurs et des Personnes Élégantes*, wanted to work on the design and equipment: telephone holder, front and rear lights, cane holder, etc.

Project team: Yohann, Charlie, ArianeGroup employees

Status of the project: Finished



PROMOTE A MODEL OF TRANSFORMATION THROUGH THE WORLD AND SOCIETY

Swarming of Humanlabs

National

In France, the Humanlabs installed between 2017 and 2018 are still in operation and continue to develop their activities.



Saint-Pierre Humanlab

Created by the Saint-Pierre foundation and the Saint-Pierre Institute, it is supported by the Innov'Saint-Pierre association.

Location: Palavas-les-Flots (34)

Distinctive feature: integrated into a care center, it is made of a multidisciplinary team (doctor, occupational therapist, engineer, ortho-prosthetist).

Referent: Benoît Sijobert, Fabmanager



LaboCesson Humanlab

It is supported by the LaboCesson association which works particularly on robotics.

Location: Cesson-Sévigné (35)

Distinctive feature: in geographic proximity to MHK, it allows important collaborations between the two structures.

Referent: Ghislain Bonneau, President



Humanlab of the University of Bretagne Occidentale

Supported by the Fablab Open Factory of the University of Bretagne Occidentale.

Location: Brest (29)

Distinctive feature: Integrated into the UWB, it welcomes students and their projects all year round. Benefiting from a beautiful space and a large team, it is a place of research and development that crossed a great deal of know-how.

Referent: Adamou Souley, Fabmanager

In 2019, two new structures validated the installation of their Humanlab and were thus able to officially sign an agreement with MHK.

APAJH44 Humanlab



It was born under the impulse of a person who was a user of the Medico-Social Support Service for Disabled Adults (SAMSAH) and he therefore settled naturally in the locals of this APAJH service. Inaugurated in September 2019, the Humanlab has been able to start about ten projects.

Location: Nantes (44)

Our help:

- A methodological support,
- The provision of the association's framework documents (budget, communication materials, internal regulations, etc.),
- Support in writing funding files,
- Participation in partner mobilization meetings.

Referent: Samuel Dabouis, Fabmanager

ArianeGroup Humanlab



The Humanlab is supported by the group's Innovation department, under the impulse of François Le Berre, innovation project manager, and with the support of Hervé Gilibert, technical director. Installed within a top secret industrial site, it cannot be an open area. However, it is intended to find innovative and collaborative solutions for disabled employees in the society.

Location: Les Mureaux (78)

Our help:

- Constructing a solid partnership with the decision makers,
- Support in the machines and tools choice.

Referent: François Le Berre, Innovation Project Manager

Three other Humanlabs projects were initiated in 2019.



Humanlab of the Petite Lande middle school

Michel Fréard, technology teacher in Rezé (44), MHK adherent and partner for a long time, supports with us the Humanlab AFRICA project. After exploring disability thematic and digital manufacturing into the middle school "Humanlab club" and in his classes, Michel supports today an agreement with MHK to install a permanent Humanlab into the institution. Changing our view in schools, innovation, learning and collaboration with Nantes's actors are planned for this future Humanlab.



Lablab association Humanlab

Fabien Cacheux, supporter of a Humanlab project in Laval (53) met MHK in autumn 2019 and spent some half-days in Rennes to get some inspiration as well as all the information he needed. In late 2019, he formed a first collective of volunteers and met the local actors to approve the project.

AFM-Téléthon Humanlab

Cécile Bar, mission head for AFM-Téléthon, has been following MHK's projects for several years. She supports a project of implementing a Humanlab within a new medico-welfare establishment near Angers (49). In 2019, MHK welcomed an AFM local and national delegation to present our project and possible deployments. A first collaboration on a low-pressure contactor project is scheduled for 2020.



To summarize, the map below represents the geographical repartition of Humanlabs in France: the ones labeled before or in 2019 (orange) and the ones with which we initiated exchanges in 2019 (blue).



International

Humanlabs AFRICA: Senfablab, Babylab and Wakatlab



Humanlabs' development abroad is mostly structured around the Humanlab AFRICA project. In collaboration with the Petite Lande middle school in Rezé (44), it has for objectives to:

- Equip with digital manufacturing material three fablabs in French-speaking Africa mostly working on health and disability thematic: Senfablab (Dakar, Senegal), Babylab (Abidjan, Ivory Coast) and Wakatlab – the former Ouagalab (Ouagadougou, Burkina Faso),
- Create educational materials for the Petite Lande middle school,
- Organize transfers of expertise between Humanlabs.

In 2019, the solidarity week and race organized by the middle school allowed to collect nearly 20 000 euros of donations reversed to MHK, which directly financed the Humanlab AFRICA project.

Those donations allowed to buy and send equipment to the three fablabs. After diverse events and an important work in logistics (thank you Yohann), all the machines, tools, components, etc were transported in December 2019.

Hugues Aubin, MHK co-founder and former coordinator, still engaged as a volunteer in the association, took on the ambassador role of the Humanlab AFRICA project for the Make Africa 2019 summit organized in Benin. Thanks to this, the Blolab (Cotonou, Benin) gets closer to the Humanlabs network and common projects have been mentioned for 2020.

Humanlab Maker's Asylum, India



MAKER'S
ASYLUM™

The links with the Humanlab established in Bombay Maker's Asylum in India are thinner, even though we follow each other's news. The common event organized in 2018 was a real success but distance and both structures activities did not allow to find new collaboration fields at the moment.

Education, Disability and Digital Technologies

In 2019, MHK and the Ille-et-Vilaine French department initiated an ambitious project which goal is to raise awareness on disabilities in schools through the implementation of digital work groups shared between teenagers, disabled or not. The work groups fill three different roles:

- Socializing of the different public,
- Developing disabilities technical helps,
- Raising awareness on disabilities problematic.

Those work groups and works are documented and planned to be shared to the whole educational community. Lucie, hired in January 2019, manages the project and is in charge of the interventions and work groups preparation.

Interventions on the Ille-et-Vilaine French department

Several educational structures are implicated in 2019:

- Hautes-Ourmes middle school, Rennes,
- Chalais middle school, Rennes,
- PREFEAS Medical and Educational Institution,
- Bellevue middle school, Redon,
- Clarté's Institution for the Motor Skills Education, Redon.



Intervention methods

The digital workshops are experimental, and they can take different forms. After one year of implementation, the structure and projects were categorized according to 4 methods.

Meetings

Accessibility, mobility, design, open source, "handicapowerment", digital manufacturing... Many subjects can be approached during the association's presentations, visits of our Humanlab or meetings with our volunteers, employees, or partners.

Workshops

During MHK workshops, volunteer students produce technical aids or projects related to the digital world. These workshops concern young people with or without disabilities. Meetings can take place during lunch breaks, duty period or in another format depending on the needs.

In the curriculum

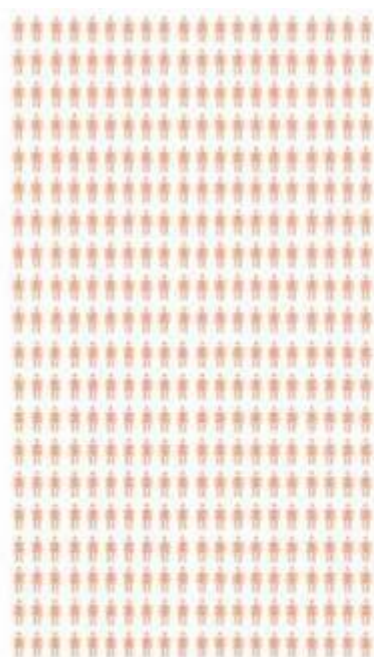
A pedagogical sequence included in the curriculum can be co-developed with a teacher. This sequence can initiate a co-instruction, the development of educational materials or the organization of visits to our lab. Currently, we have taken part in subjects such as Technology, Plastic Arts and Home Building which is part of SEGPA or the General and Vocational Adapted Learning Section.

Other projects

Our interventions can enrich an institution's already existing curriculum or even broaden the fields of the EPI or, in English, the Interdisciplinary and Practical Lessons (projects with the DRAC or the Regional Direction of Cultural affairs, experimental classes, Citizenship Day, etc.).

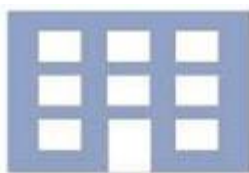


The 2019 project in a few numbers



+ 400

Mobilized students



3

Middle schools



24

Projects



7-14

Sessions
a week

Examples of completed project

Example of a project Technology



PROJECT: OPENWOODCHAIR

This project was inspired by the technical aid OpenWoodChair, a motorized wheelchair made from recycled materials developed by My Human Kit. Schoolchildren will be led to search a technical solution in order to remotely control an OpenWoodChair's mock-up by programming two Micro:Bit cards.

Issue: once in his bed, before sleeping, a disabled child wants to charge his motorized wheelchair on a terminal during night. Find an affordable solution adapted to a child with no fine motor skills.

Dates: February 2019-June 2019 and November 2019- February 2020
Target public: three 7th grade classes

The project team:

Séverin Druart, technology teacher, middle school of Hautes Ourmes. Lucie Le Guen, pedagogical fabmanager, My Human Kit

ENTIRE CLASS SHARED
IDEATION, 3D MODELLING, 3D PRINTING, MANUFACTURING, FABLAB CULTURE DIGITAL
TECHNICAL AID THROUGH PEDAGOGICAL SUPPORT WORKSHOP



Example of a project Arts & Crafts



PROJECT: SHIVA

The Shiva project by My Human Kit consists in developing "aesthetic" hands, that is to say none mechanized, in a cheap and easily replicable way. This time around, we chose to involve Nicolas Huchet as a disabled project manager to share his needs for prostheses with the schoolchildren. We started on two different ideas: hands for his show "One Man Chot" and "tool" hands.

Dates: November 2019- January 2019
Target public: two 8th grade classes

The project team:

Mathilde Ripoché, arts and crafts teacher, middle school of Hautes Ourmes. Nicolas Huchet, founder of My Human Kit
Lucie Le Guen, pedagogical fabmanager, My Human Kit

ENTIRE CLASS SHARED
IDEATION, DESIGN, MANUFACTURING, FABLAB CULTURE DIGITAL
TECHNICAL AID THROUGH PEDAGOGICAL SUPPORT WORKSHOP



Example of a project EXPERIMENTAL CLASS



PROJECT: GAMING FOR ALL

The middle school of Chalais implemented experimental classes within which, one morning a week, the children can choose the project they want to carry out. We suggested them to work on the design of adapted game controllers. According to the disability, classic game controllers are not always adapted. Indeed, one must have two hands, all of his fingers, fine motor skills, a high fingers strength... Thanks to three different techniques, this project allows the children to give their answers to these issues.

Dates: November-December 2019

Target public: fifteen 6th 7th and 8th grade schoolchildren + two children from the IME

The project team:

Jonathan Ménir, disabled project manager, My Human Kit. Vanessa Vaucelle, social educator, AMISEP
Julie Vergne, history and geography teacher, middle school of Chalais
Lucie Le Guen, pedagogical fabmanager, My Human Kit

ENTIRE CLASS SHARED
IDEATION, DESIGN, 3D MODELLING, ELECTRONIC, MANUFACTURING DIGITAL
VARIOUS FORMATS WORKSHOP



Example of a project MHK WORKSHOPS



PROJECT: A LIGHTSABER FOR SACHA

Sacha is a child from La Clarté and a fan of Star Wars. In order to stay focused at school, his psychomotor therapist advised him to do some physical exercises with an expander (workout tool). With the purpose of making those exercises more playful, the 8th grade children added a system that activates a lightsaber shape light every time Sacha does his exercises.

Dates: April-June 2019 and October 2019-March 2020

The project team:

Marie-Claire Leduc, unity of middle school teacher, IEM of La Clarté
Lucie Le Guen, pedagogical fabmanager, My Human Kit

SMALL GROUP SHARED
IDEATION, DESIGN, 3D MODELLING, ELECTRONIC, MANUFACTURING DIGITAL
DESIGN OF A TECHNICAL AID FOR DISABILITY WITH CHILDREN WORKSHOP



Digital manufacture, disability, and social work



Since 2017, Askoria's social working educational center, welcomes in its premises our Humanlab. MHK works close with the "Campus des Solidarités", a transversal service of innovation and joint experimentation.

In exchange of this availability of their premises, MHK's mission is to raise awareness among students about digital manufacturing through workshops, presentations, visits of our Humanlab, etc.

In 2019, Delphine directed a workshop with female students from the AES or, in English, the social and educational accompaniment course. Discussing autism matters, they were able to develop an object to ease the daily life of a disabled young boy: the interactive wall covering. This object encourages a child with mild autism spectrum disorder to sleep in his bedroom through the implementation of a bedtime routine.



The highlight of this year in Askoria was the MHK's participation in the 2019 *Salon des Experimentations et Innovations Solidaires*. On the agenda: an encounter with students and other people interested in our project, search of partnerships and discovering of the local actors of solidarity projects. Our Humanlab also welcomed close to 500 visitors that day. In 2019, our neighbor was the medical equipment developer Orthopus who demonstrated the robotic arm Nyrio that Nicolas Pousset commissioned.

Fabrikarium: a collaboration model for a renewed perspective on disability in the workplace

The Fabrikarium, a hackathon form developed by MHK, is a collaboration and prototyping support used since the very beginning of our association to achieve several goals:

- To raise awareness about the consideration of disabilities in professional environments,
- To develop a creative and innovative approach on disabilities,
- To expedite the technical support manufacturing projects,
- To create a bond between a volunteer community and a professional working community,
- To document and give a free disability technical support to those who need it.

In 2019, ArianeGroup adopts the concept and accepts to organize the first edition in their premises in Mureaux, Yvelines. The watchword is simple: "Let your creativity take-off".



It's the prime contractor of the European rocket launchers Ariane 5 and Ariane 6 that welcomes 20 members of the MHK community. In addition to these, 30 workers from ArianeGroup volunteered and got involved. All of these people full of energy were divided into 5 teams that worked each with one person with disabilities and a precise project in mind.



"Magic joystick", a joystick adapted to all strengths to allow Jonathan who suffers from myopathy to play videogames with his wheelchair joystick.



"Déclic", a mouse placed under the arm to answer Nico's need (hand amputee) to draw on his computer.



"Wi-cane", an electronic white cane to help François (visually impaired) detect obstacles.



"Ariane route", soon to be renamed "Vespace", a tricycle manufactured from a recycled bicycle motor. It should make Adamou's transportations easier as he suffers from polio.



"Gantelet", a multifunction glove suitable for Solène's agenesia (hand malformation). Very useful for daily activities.

All of the projects were documented in open source by the FlossManuals organization in order to be shared, replicated and improved all around the world.

This human adventure combined the expertise of the "rocket scientists" from the ArianeGroup with the creativity of the My Human Kit makers' sober innovation. This adventure also contributed to changing the perception of disabilities, which is now a source of inspiration within the company.



The main coordinator of this project at ArianeGroup and also the first MHK support, François Le Berre, perfectly describe the overall mood during those three days:

"These two completely different worlds that meet are just like a mangrove: a junction between land and sea where life swarms."

Various acts of awareness



L'Art et la main festival, organized by the 3 regards organization, in order to discover technical and manual workshops in Rennes. MHK volunteers ran an exhibition stand for 2 days.



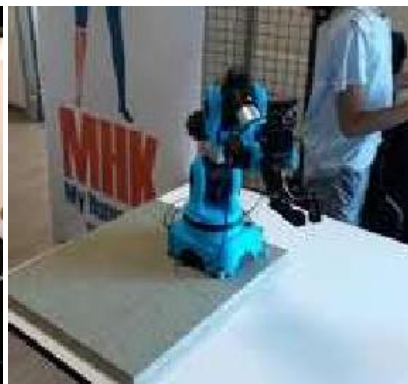
The Mental Health Awareness week, national event which allows discussions and debates on innovation and mental health. The opportunity to showcase our work with young people from the different IME (Medical and Educational Institution).



Femmes en Entreprise adaptée trophies, granted by Handiréseau. This event highlights career paths of women in a people-first company, the opportunity to present the HumanLab and the fablabs' feminization process.



"Transhumanism, superhuman or machine?" Conference, Nicolas Huchet talked about his experience and the necessity to think about the place of disability in society.



Regional Day of the AFM Téléthon Families, the opportunity for MHK to present the HumanLab and for Nicolas Pousset to present the Bras Robot (robot arm) project.



U-Exist fashion show with people with disabilities in order to highlight the aesthetic prosthetics, including Nicolas Huchet's one.



ASSEDEA Families Weekend, an association that supports families and children with agenesis and hand malformations. Nico and Charlie presented the last MHK prototypes linked with this disability.



IFA, an International Fashion School, invited Nicolas to be the project leader of the "main esthétique" (aesthetic hand) project for which students worked on different practical and fashionable projects.



Digital Transition for People with Disabilities Day, organized by the APF. Pauline, Nico and Nicolas presented the association and the prototypes used for video games accessibility.



Each year, ADAPT and AGEFIPH organize a program of activities for the **European Week for the Employment of People with Disabilities**. MHK ran a stand at the "Maison des Associations".



Mastercard Innovation Forum, an event for the company's partners, Nico was invited to speak about "the impact of innovation in today's world".



On the occasion of the International Day of Persons with Disabilities, the Musée de l'Homme opened the **exhibition "Être beau"**, a series of portraits of people, of all ages, all backgrounds, all professions, who have in common the fact that they are different.

Bonus: Taratata

An invitation by Nicolas Pousset to attend the recordings of Taratata, the networks and the courage of Nicolas Huchet to ask Jean-Louis Aubert to play with him, the curiosity of Nagui for MHK: an exceptional cocktail for a great emotional moment! Nicolas' drum performance alongside Jean-Louis Aubert and Gaëtan Roussel on the "Hygiaphone" was broadcast on December 20, 2019, followed by a presentation of the association by Nagui and Jean-Louis. It caused a surge of generosity from the audience. Coinciding with the recent launch of the My Human Kit Web page on HelloAsso, almost 2000€ in donations were easily and safely collected online from all over France.



MANAGEMENT REPORT

Community life

An involved office

In 2019, the association office continued to evolve. Today, it's composed of five members. They met five times in 2019 and ran following works (in addition to monitoring the activities and manage the association):

- Recruitment of a new manager,
- Annual employee interviews,
- Rewriting of the associative project,
- General meeting preparation.



Nicolas Pousset, project leader, volunteer and MHK ambassador joined the office team in 2019. It has really helped to raise the visibility of the beneficiaries within the office. Thanks to him for his commitment.

Committed volunteers

The community involved in the voluntary project continues its mobilization. In 2019, the volunteers invested a lot in:

- events organized by the Fabrikarium ArianeGroup association,
- events the association participates in: Stunfest, Paris Games Week, Nantes Maker Campus, Disability Employment Week, the "L'Art et la Main" festival, etc.,
- the life of the Humanlab and the production of technical aids, particularly every Thursdays during open days.

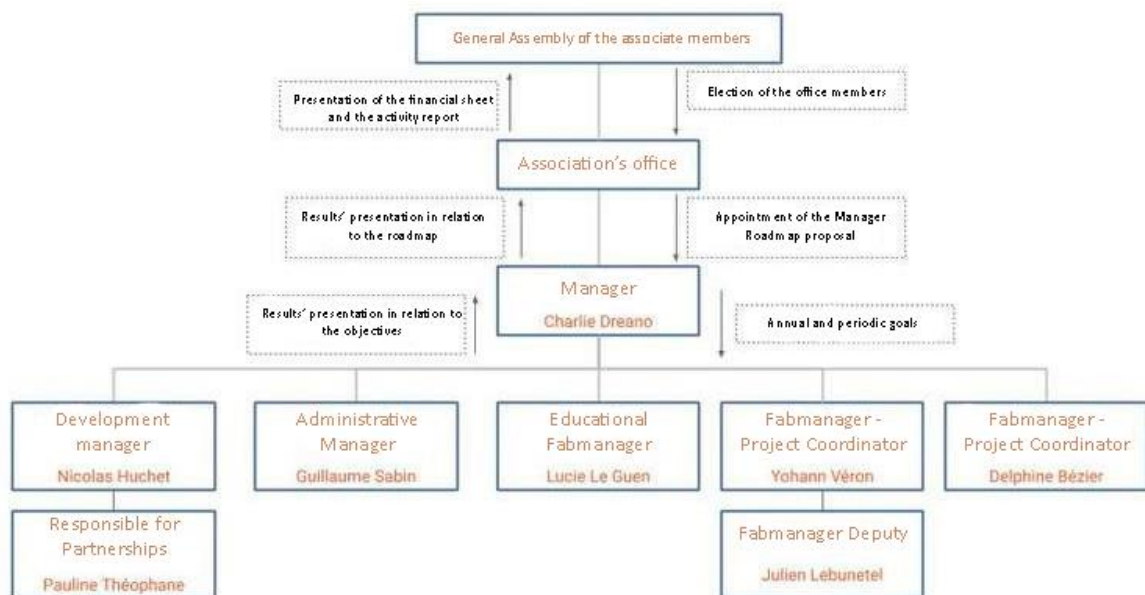
Each year we try to count volunteer hours to include them in the association's totals and reveal this true richness. In 2019, almost 1,300 hours of voluntary work have been given on behalf of the association. Citizens, students, retirees, job seekers, engineers, artists, teachers, curious people: the community of members and volunteers is multifaceted. Those who come to MKH are mostly inhabitants of Rennes and its surroundings. They're here to pursue the same ambitions: create, learn, share and develop.

Team

At the end of 2019, the team was composed of 8 permanent members, which equals to 7.5 full-time members. This year has been notable because of important movements in the team's life:

- After 3 years of involvement that have allowed the voluntary project to find its first partners and to develop substantially, Hugues Aubin left his position in February 2019 before regaining his post in Rennes Métropole.
- Charlie Dréano was recruited in March 2019 to the director's position that did not exist earlier. The recruitment, directed by the Bureau, had this roadmap: building a team and its functioning, role clarification, stronger relationship with the volunteer governance and fundraising.
- Hired in January 2019, Lucie Le Guen has known the association since its beginning and has followed the Bionicohand project for a long time. She joined the team as a pedagogical fabmanager to direct the "Education, Handicap et Numérique" project with the Departmental Council of Ille-et-Vilaine. The quality of her interventions, her capacity to experiment and her concern for transmission are precious assets for MHK and educational projects.
- Hired in September 2019 as a partnership manager, Pauline Théophane's mission is to make the connection easier with many partners, to support the fundraising and to develop necessary tools for the monitoring of the various relations. Coming from Bordeaux's region and used to relations with big industrial groups, her professionalism and her methodology represent already a precious help for the development of the association.

At the end of 2019, this is what the association's organization chart looked like.



Some figures of 2019

- 5 permanent full-time and 3 fixed-term part-time contracts
- A 300k payroll
- 1 civic service
- 1 tutored project Assistant and technical adviser in electrical and renewable energy: Open Source Vehicle
- 3 discovery internships
- 1 intern in the Education Center of Translators, Localizers, Terminologists and Technical Writers (CFTR)

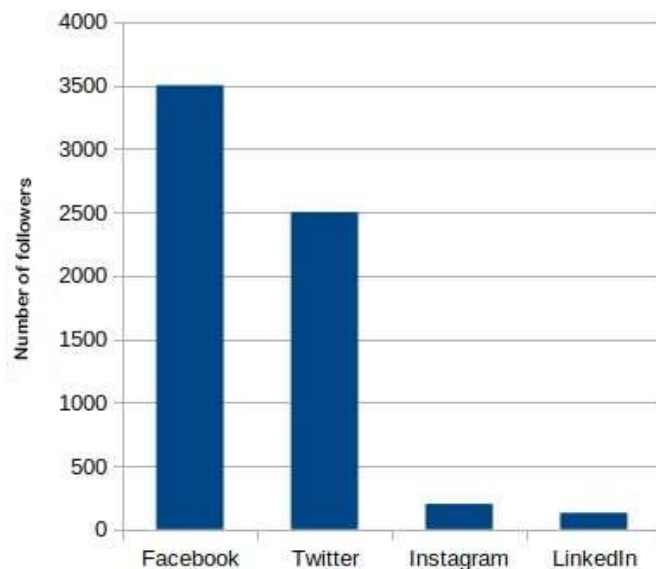
Communication

Press review

In 2019, thanks to its actions, My Human Kit appeared 34 times in national and local French media, including:

- Le Télégramme: "Autisme : un centre spécialisé au coeur du collège"
- Ouest France: "Des jeunes autistes parmi les collégiens"
- Le midi libre: "La course solidaire pour le Humanlab Saint-Pierre"
- Le Télégramme: "L'UBO Open Factory avance avec son Humanlab"
- Ouest France: "Ils ont créé des objets pour aider les personnes handicapées"
- Le Parisien: "Les ingénieurs d'ArianeGroup mettent leur talent au service du handicap"
- Arte: "Reportage Regards : Handicap et High Tech"
- France Télévision (spot): "My Human kit avec la fondation MMA"
- Europe 1: The solution : "My Human Kit", technical innovations to improve the daily life of disabled people, in the TV program La France Bouge

Social networks



In 2019, My Human Kit gathered its largest community of followers on Facebook and Twitter. The association's communicative efforts are essentially focused on those two channels.

The Instagram account, launched in November 2018, reaches a younger audience, with short and visual contents.

Finally, in October 2019, My Human Kit created its LinkedIn page to reach a public of professionals in order to increase visibility with current or potential technical and financial partners.

IMPORTANT PARTNERS

They keep supporting us in 2019

Partner of social innovation



Under François Hollande's presidency, La France S'engage Foundation assists or has assisted almost 120 projects throughout France. Being a FFE Laureate is a financial support but also an help in structuring and changing scale. The foundation is an important support to the development of MHK and often offers workshops and training courses, as well as the mobilization of a group of experts (economic, legal, marketing etc.).

Partner in education and in equal opportunities



Through its Departmental Educational Digital Plan and innovation service, the Department of Ille-et-Vilaine helps and supports the "Education, Disability and Digital Technology" project led by MHK. The funding goes directly to the human and material resources that keep the project alive. The first public partner in the history of MHK, the Departmental Council allows us to see disability in educational institutions with fresh eyes.

Partner in Open source and digital technology



Fondation Free pursues its objective of making digital technology accessible to the largest number of people. It encourages sharing, collaboration and transmission of digital knowledge. Those ambitions, shared with MHK, made Free a key partner in 2019. Its support allowed us to finance two key positions within the association (Fabmanager and Partnership Manager).

They are joining us in 2019

Partner in health and social protection



IRCEM group is the social protection group that operates in family jobs and human services. It's a nonprofit joint organization, which is very involved in disability issues, and thus naturally a partner of the National Committee Coordination Action Disability (CCAH), a French association. It's the latter that enabled to form a relation with MHK. The IRCEM group is an important funder of our voluntary project until 2022 and is strongly committed to support all of it. From 2020 onwards, joint actions will be set up to value this partnership.

Partner in technological innovation



As the European leader in space launchers, ArianeGroup aims to make space accessible through technology and innovation. Early 2019, after a partnership with Airbus, MHK reached ArianeGroup and they joined us in the Fabrikarium adventure. Because ArianeGroup is convinced by the quality of the association's project and by the necessity of a partnership to develop its Corporate Social Responsibility (CSR) and its approach regarding disability, it committed itself to a financial and skill support over the next 3 years.

Prizes and Awards in 2019

Grand Prize of the *Bonnes Nouvelles des Territoires*



The Grand Prize of the *Bonnes Nouvelles des Territoires* from the MMA foundation identifies, rewards and accompanies local and inspiring successes to turn them into models for every businessperson. Businesspeople who have been distinguished and supported for 10 years now constitute a community that shares similar values. For the 10th edition, My Human Kit was named Social and Solidarity-based company by the MMA foundation.

Innovation Team Best Practices



The *Club de Paris des Directeurs de l'Innovation*, the European Institute for Creative Strategies and Innovation, the Master in Innovation and Management of Technologies of the Sorbonne and the Chaire ETI (Entrepreneurship, Territory, Innovation) of the IAE Paris Sorbonne Business School awarded the "Innovation Team Best Practices" trophies to the teams that best embody innovation thanks to their work, their organization and their actions.

MY HUMAN KIT IDENTITY CARD



Non-profit organization declared to the prefecture of Ille-et-Vilaine

Siret number: 809 560 360 00038

APE code (principal activity exercised): 9499Z



Creation date: 02/11/2014



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Thematic site: wikilab.myhumankit.org



Statutory auditor: Julien BASLE

Accounting firm: CAFEX SAS

Bank: Crédit Coopératif



Association office:

- Alexandre LOISON, Chairman
- John LEJEUNE, Vice Chairman
- Christian FROMENTIN, Secretary
- Nicolas POUSSET, Assistant secretary
- Christophe ARRAULT, Treasurer

Social networks:



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