

MANCHESTER SCHOOL
OF ARCHITECTURE

CIRQUE DU ARC

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MSA
LIVE 21

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Partners

The Circus House is a community driven collective that work with a range of companies across the United Kingdom aiming to provide, people of all ages and abilities, the opportunity to take part in fun circus activities. It doesn't matter the age, gender, ability, The Circus House can teach anyone and everyone with their extensive range of workshops. To make the workshops as accessible as possible, taster sessions and holiday workshops are offered at an affordable price. Community engagement is one of The Circus House's strongest values. The company is run solely for the benefit of the people use it whilst all profits are invested in new equipment and spaces to make sure the people taking part get the best experience and have the most fun possible.

Through this MSA Live experience Cirque Du Arc have thoroughly enjoyed working with The Circus House and project partner, Sian. Sian is co-founder of The Circus House and is the director of aerial and performance bookings. She's extremely helpful, polite and accommodating and provided interesting and fun challenges for Cirque Du Arc to find solutions for. The Circus House and Cirque Due Arc share similar social values and creative spark as well as the dedication to their respective discipline which is inspiring. The Circus House values it's community in Greater Manchester and continues to keep finding new and exciting ways to keep them engaged, such as The Circus House festival that will be held in November. Their main aim will be to host an array of fun and engaging workshops for all ages and abilities whilst keeping a Covid-safe environment

Agenda

Cirque Du Arc

Over the past two weeks, Cirque du Arc aimed to celebrate Circus House's 10th birthday, through the design of its first circus festival. The festival will take place across three sites, including The Circus House, NIAMOS and The Klondyke, and aims to educate people about the fun circus offers and to promote talent, involving everyone from beginners to professionals. This will include Covid-19 safe shows, workshops and lots of community engagement.

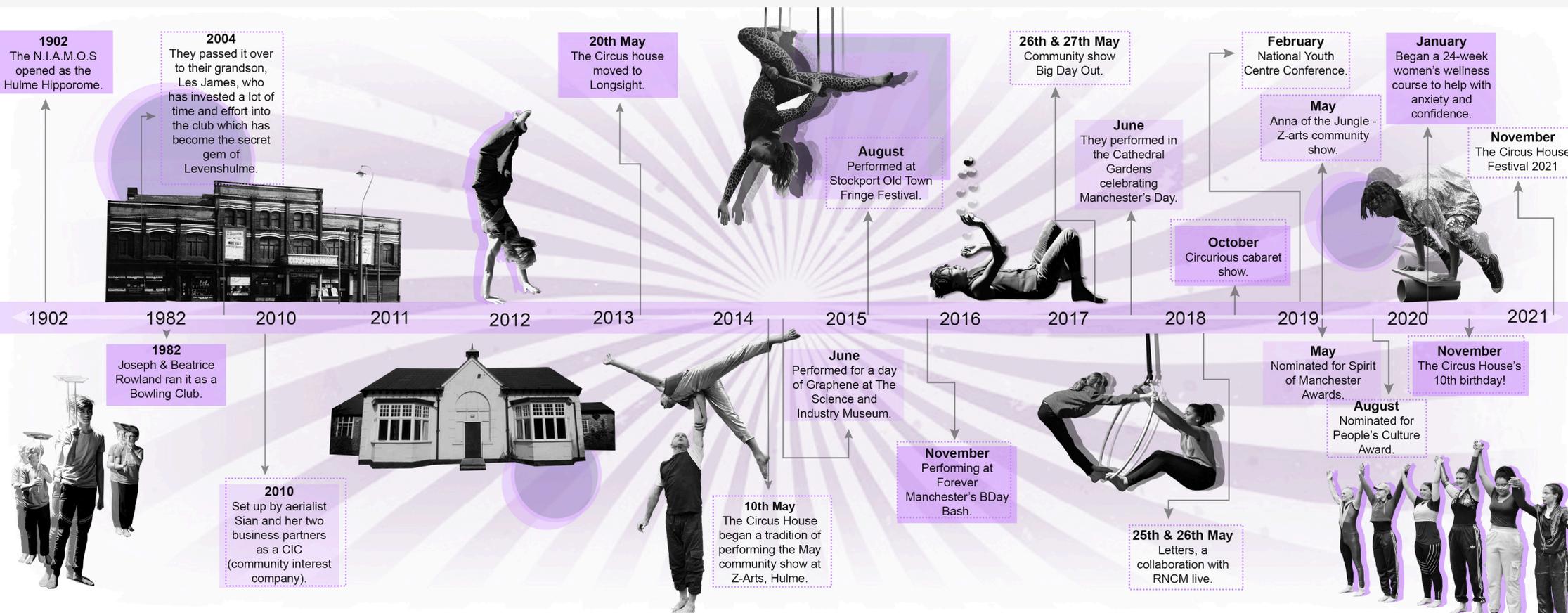
Cirque du Arc created a graphic timeline of significant milestones within the company. The history of The Circus House, the NIAMOS and the Klondyke, was researched into and key events were focused on. Ten circus activities were selected for these studies, to reflect the 10th birthday of The Circus House. Five presentations were given by the MA students throughout the weeks to ensure that the BA students were familiar with each task. The first week begun with individual research and initial collages on particular acts and their health and benefits to fulfil Circus House's 'well-being' motto. Although a wide variety of mediums were encouraged for completion of this assignment to allow freedom for students to pursue their interests, MA students provided Adobe Photoshop and InDesign workshops to the BA students to introduce new ideas for this creative task. Not only did this benefit the group outputs but this also advanced their skills on an individual level, they were hopefully able to provide the necessary skills to further the students' future careers in architecture. These collages and models were collated into an "Acro-banner," as a welcoming poster to be hung by the festival's entrances and visually engage a wider audience.

Towards the end of the first week and beginning of second week, the performance actions were drawn as ergonomic studies to assist in the spatial design of the circus workshops. Additionally, this was considered in both plan and elevation, to determine how much space an individual will need in each workshop to ensure safe social distancing. Finally, as the project approached the end of the second week, BA students cooperated as a large group by using their previously researched and illustrated knowledge to design a spatial arrangement within one of the circus' locations, NIAMOS. This groups work has brought pupils of different years and abilities together to design a potential Circus House's future workshop space.



Figure 01: 2970 x 420mm Acrobanner - combining all ten collages produced by BA students as a poster to be part of The Circus House festival.

Figure 02: A timeline depicting the history of The Circus House and the events of the past 10 years.



Acrobatics

Here are ergonomic studies on the movements involved in the basic acrobatics (acro-balance) movement, cartwheeling. Acrobatics is just one of the many workshops that The Circus House will be hosting at their Circus Festival in November. It can involve just one person or can be groups made of multiple people. These ergonomic studies look into the spans of the upper and lower body and the spatial needs surrounding this movement through the use of movement lines showing how different body parts move from one position to another.

There are many psychological benefits involved in acrobatic exercises. These consist of; having the ability to understand one's body and its capabilities and limits, gain control over one's body and its movements and, clearing one's mind of stress and anxiety. Physical benefits involve the use of muscles, these being core muscles surrounding the spine and stomach, muscles supporting the ankles, knees and hips and muscles within the arms such as the triceps, biceps, and muscles surrounding the wrists.

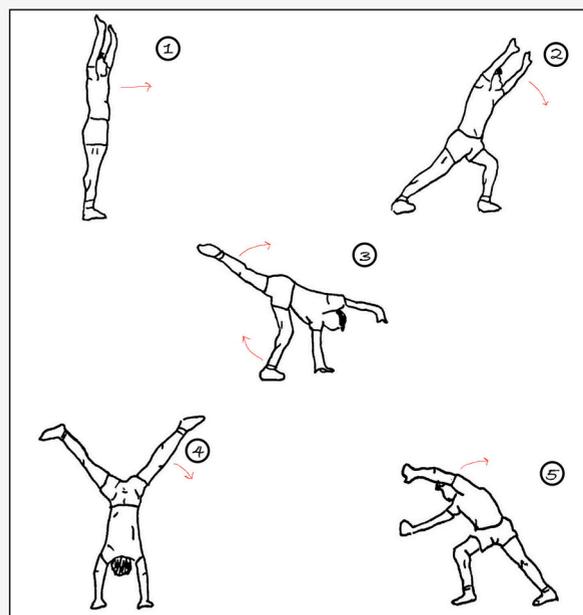
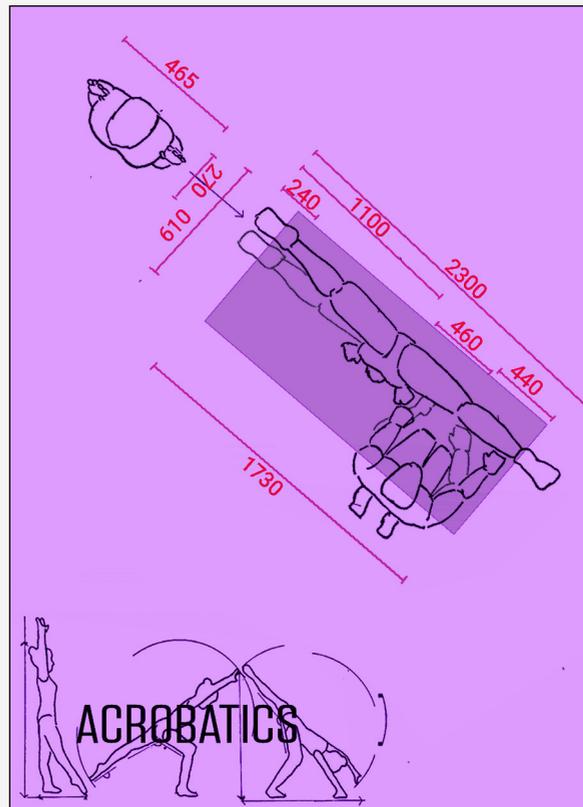
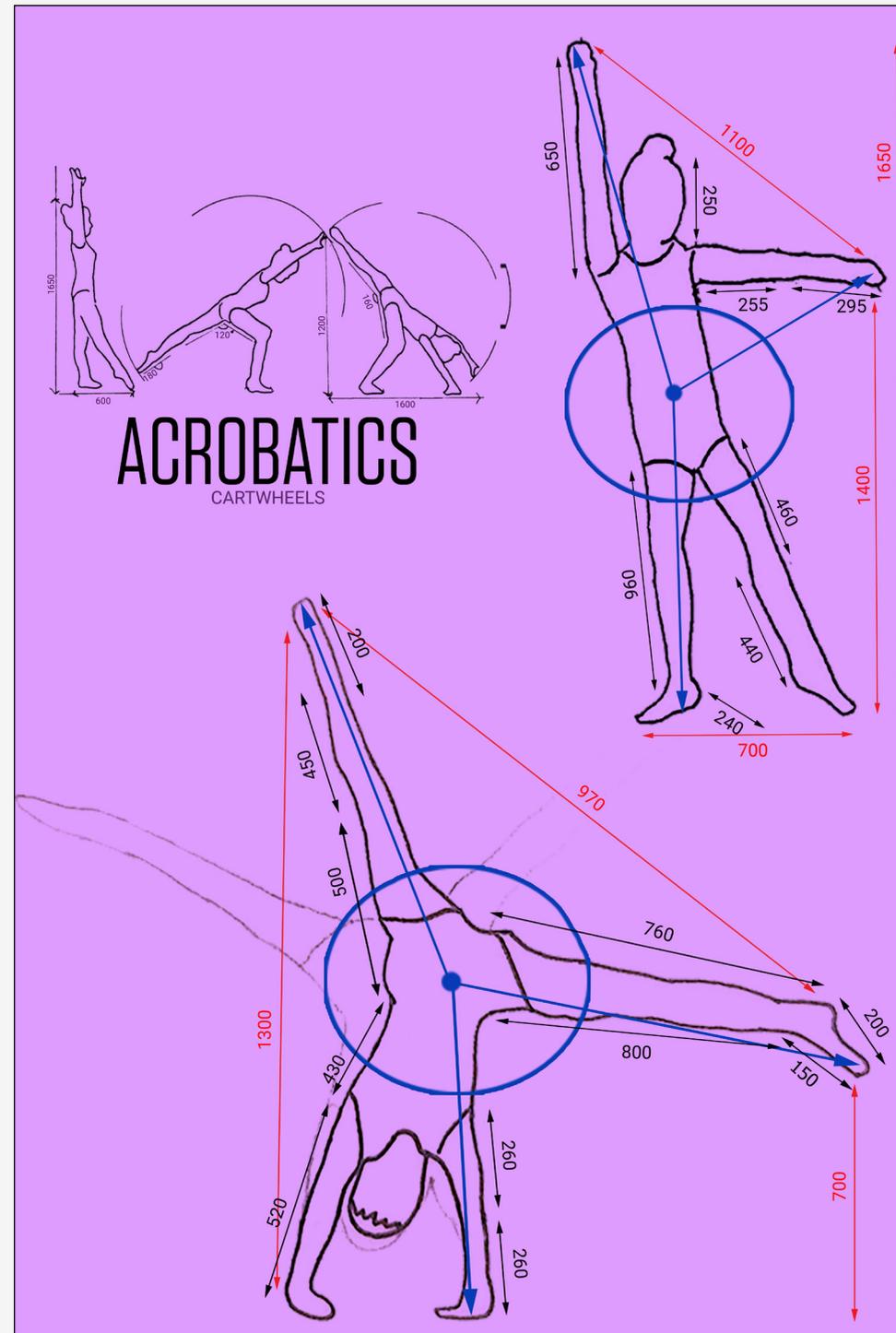


Figure 03: Top left - Hand drawn ergonomic plan drawing for a basic cartwheel.

Figure 04: Bottom left - Hand drawn step-by-step cartwheel.

Figure 05: Right - Hand drawn ergonomic elevation study for cartwheeling.



Juggling

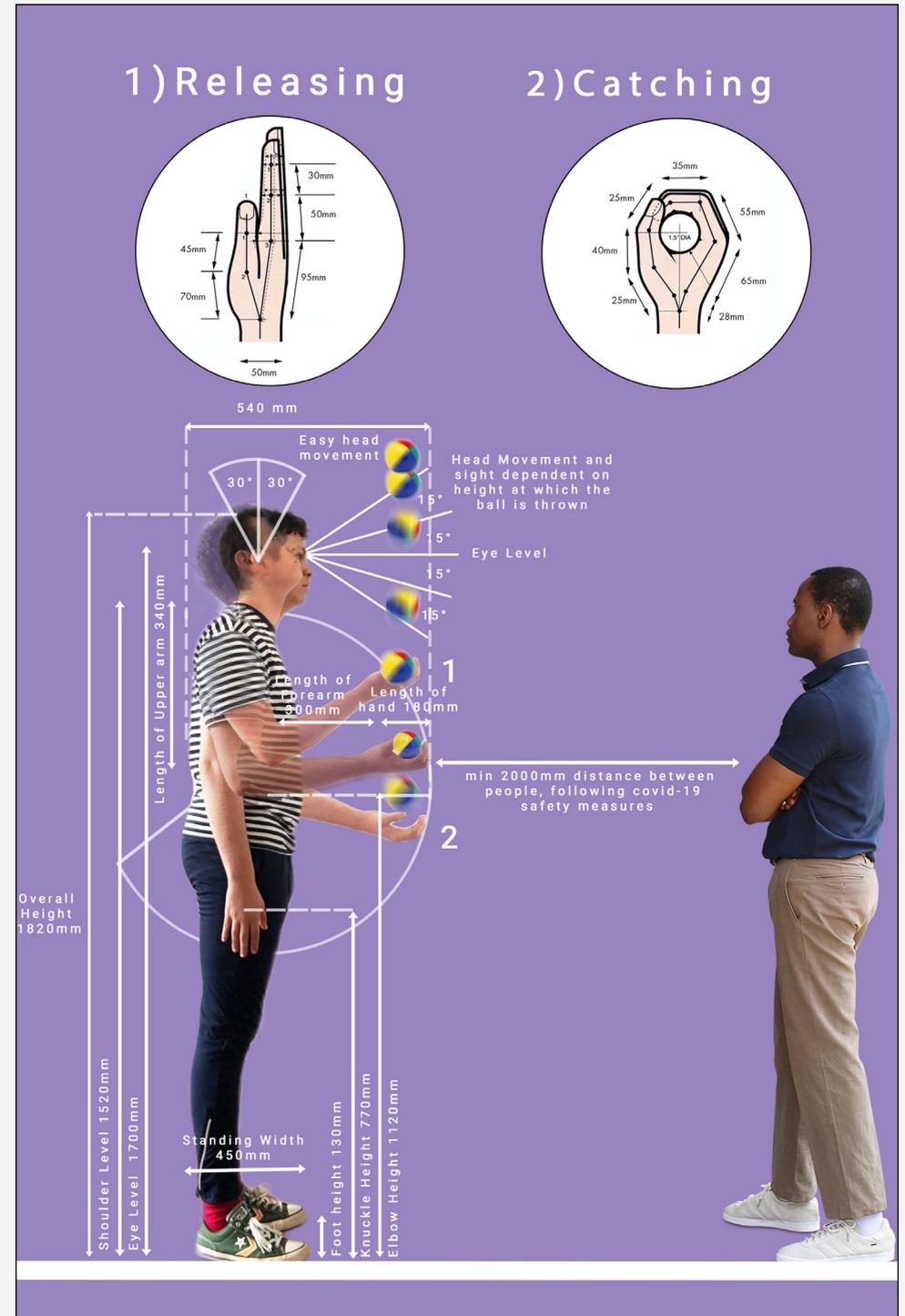
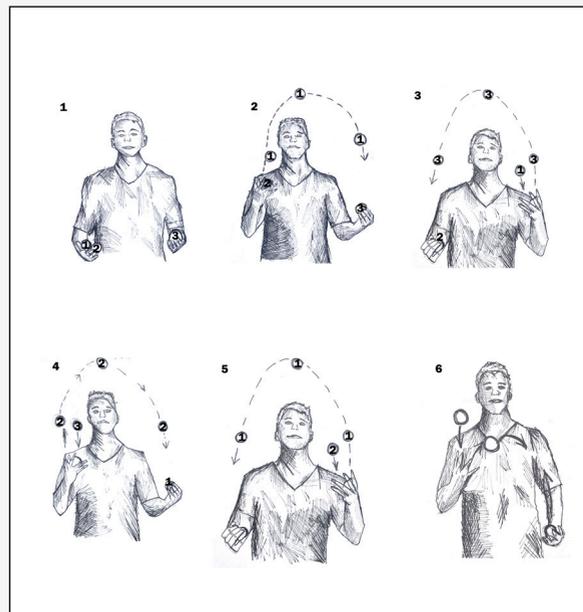
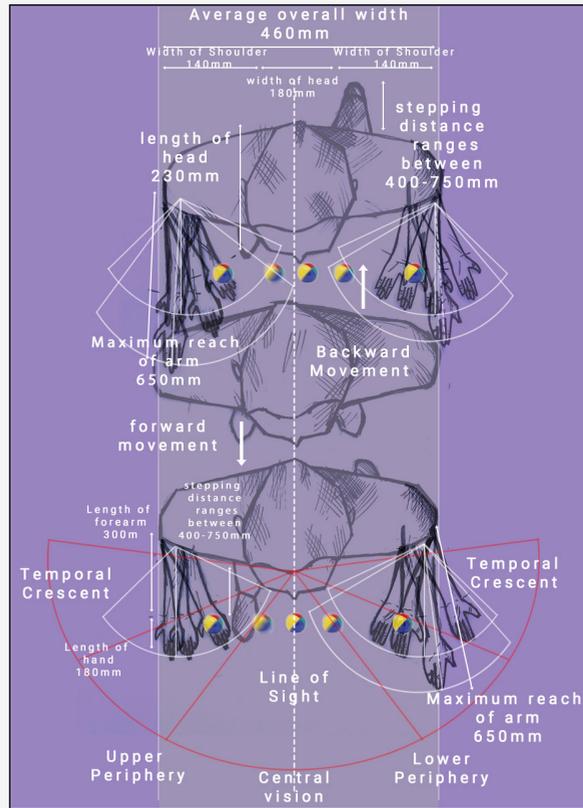
Here, juggling is presented through ergonomic studies. The top-left image shows the ergonomics of the juggling movement in plan, illustrating surrounding spatial requirements. Its purpose is to help towards dedicating space for workshops during the festival. This image in particular focuses on the distance requirements between the prop and the individual juggling, and the stepping distance required to execute this movement. A step-by-step diagram has been created for the basic movements of juggling. The poster on the right-hand page has used digital collaging methods to present the main anthropometric measurements of this activity. It concentrates on the movements of the hand, specifically the measurements for catching and releasing a juggling ball. Safety requirements have been introduced in this image, including the minimum safe distance between the performer and the onlooker.

The movement of juggling increases motion in the arms and shoulders, improving overall muscle fitness in the body. Psychological benefits include improved intelligence, increased focus, and better concentration.

Figure 06: Top left - Hand and digitally-drawn ergonomic plan drawings for juggling.

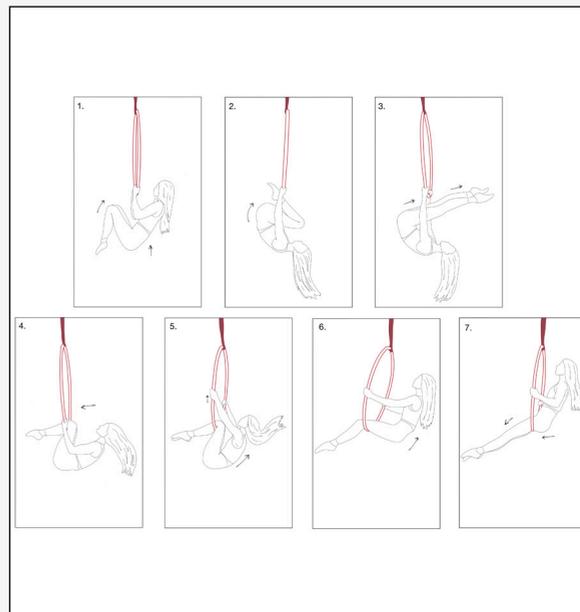
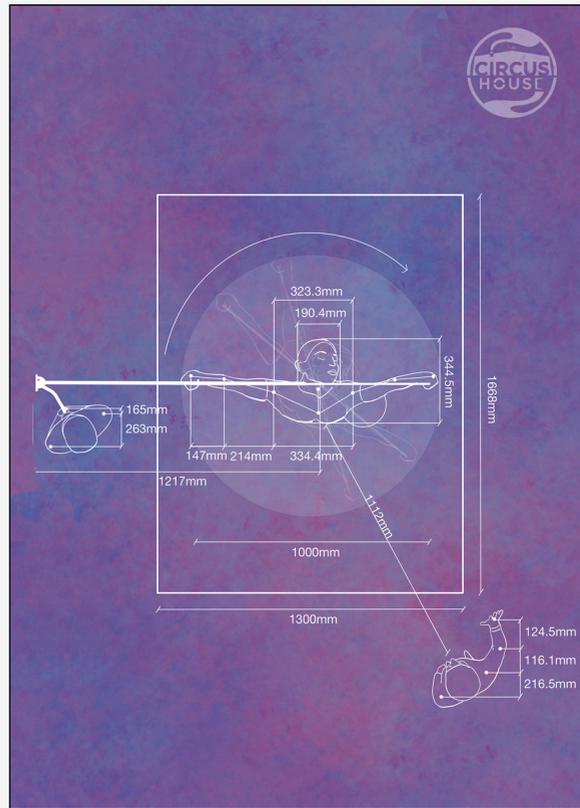
Figure 07: Bottom left - Hand drawn step-by-step juggling with 3 balls.

Figure 08: Right - Digital ergonomic elevation study for juggling using Photoshop.



Aerial Hoop

Here is an ergonomic study for the performance, aerial hoops. Also known as an ariel ring, this act uses a steel or aluminium ring suspended from the ceiling. The performer is capable of spinning, swinging, transitioning, and posing. This will be performed at The Circus House festival. The top-left image shows the ergonomics of the act in plan, illustrating the spatial requirements. This image looks at the minimum distance required between the dancer and the stage crew assisting the performance. The ergonomics poster on the right-hand page focuses on the relationship between the aerial support frame, the hoop, and the performer. Main anthropometric measurements include the height of the suspended hoop, the span of the arms and legs and the angles of rotation required for this movement.

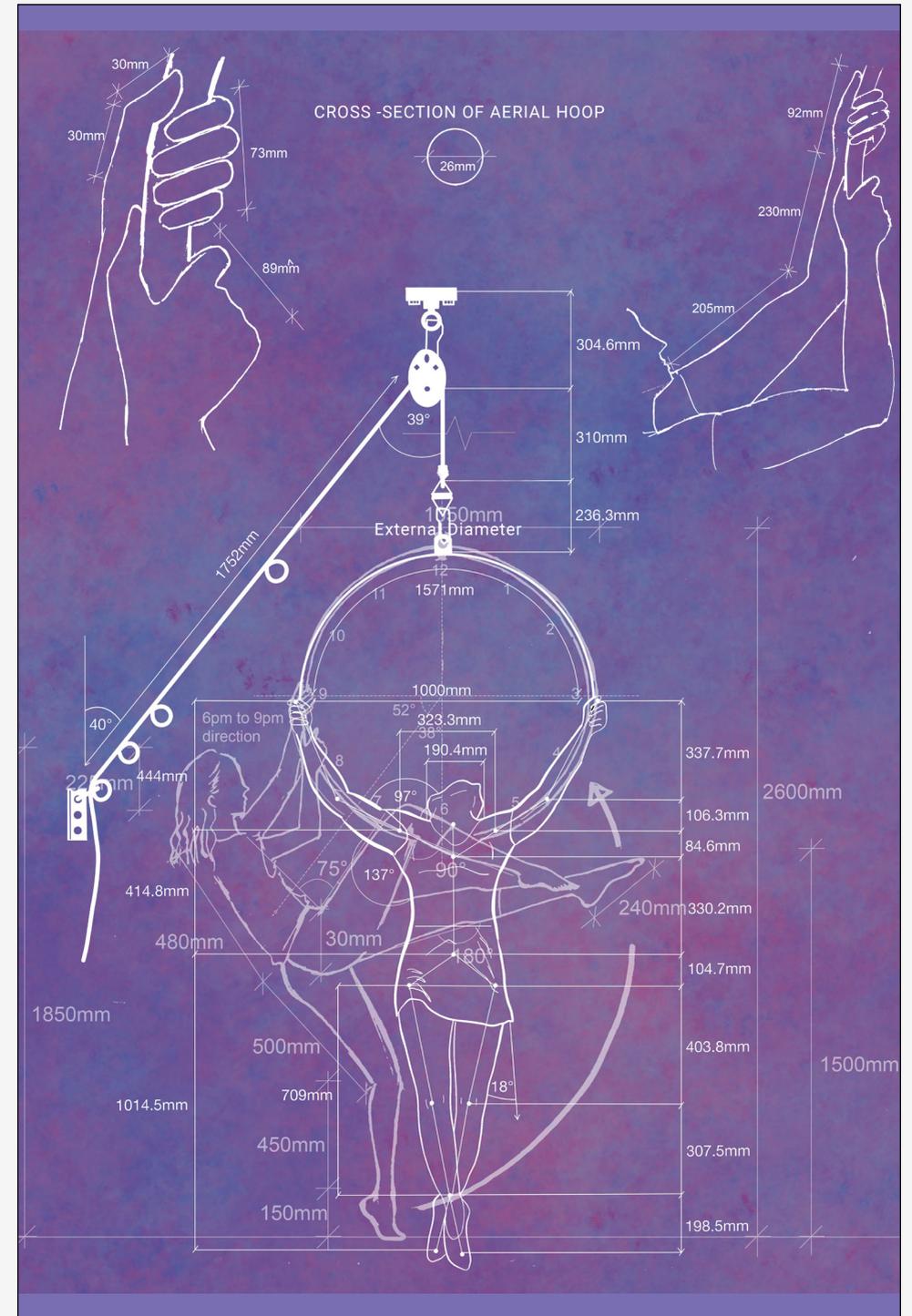


On average, aerial performers burn between 300 to 400 calories, as this activity uses several muscles, including the forearm, bicep, triceps and abdominal muscles. This increases the metabolic rate and tones muscles throughout this session. By lifting themselves, performing tricks and balancing, one can enhance flexibility and posture.

Figure 12: Top left - Hand and digitally-drawn ergonomic plan drawings for aerial hoops.

Figure 13: Bottom left - Hand drawn step-by-step for aerial hoops.

Figure 14: Right - Hand and digital-drawn elevation study for aerial hoop.



Aerial Silks

Aerial silks involve two long pieces of fabric rigged to the ceiling of the performance space so that the performer can place all of their strength and weight onto the fabric. It is an elegant act in which one uses their arms and legs to flow with the movement of the silks. The ergonomic studies carried out for this act explore both the amateur (plan) and professional (elevation) movements involved and the spacing required between each person partaking in a workshop. Focussing in elevation on how a somersault on the silks move from an upright position to a horizontal position, the change of arm and leg positions have been closely analysed and recorded.

Aerial silks target many different muscle groups including, the arms, legs and core muscles, making for a full-body workout. Whilst moving from one position to another, stress is relieved and grip, focus and strength are enhanced.

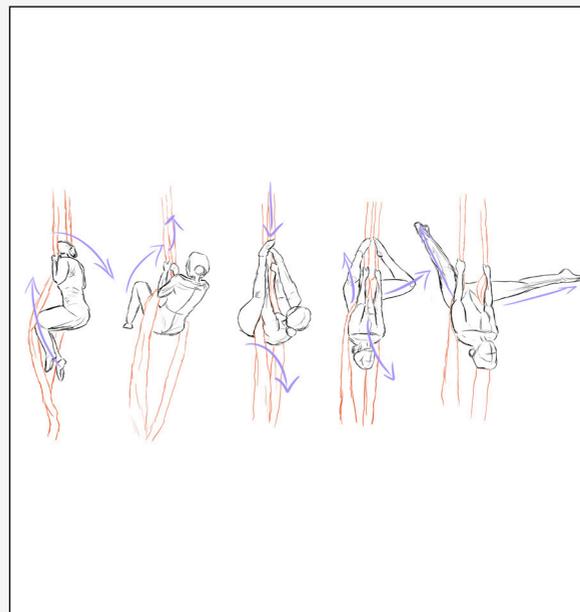
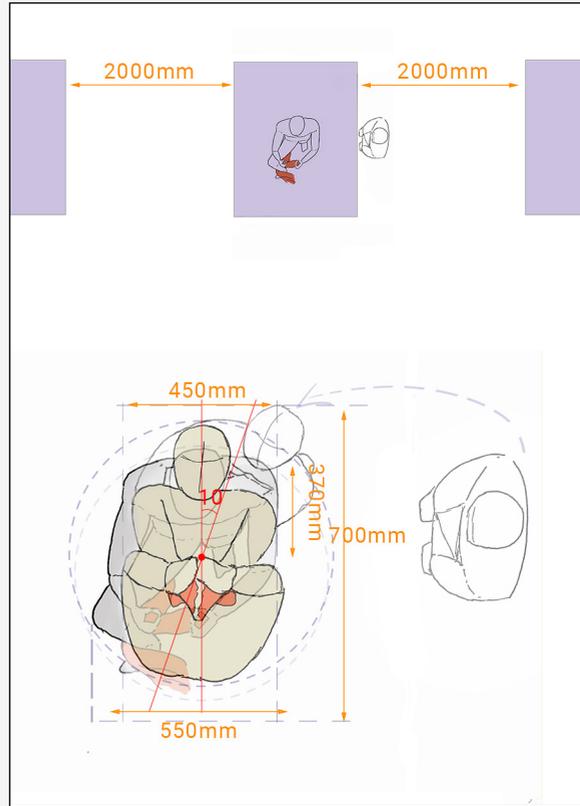
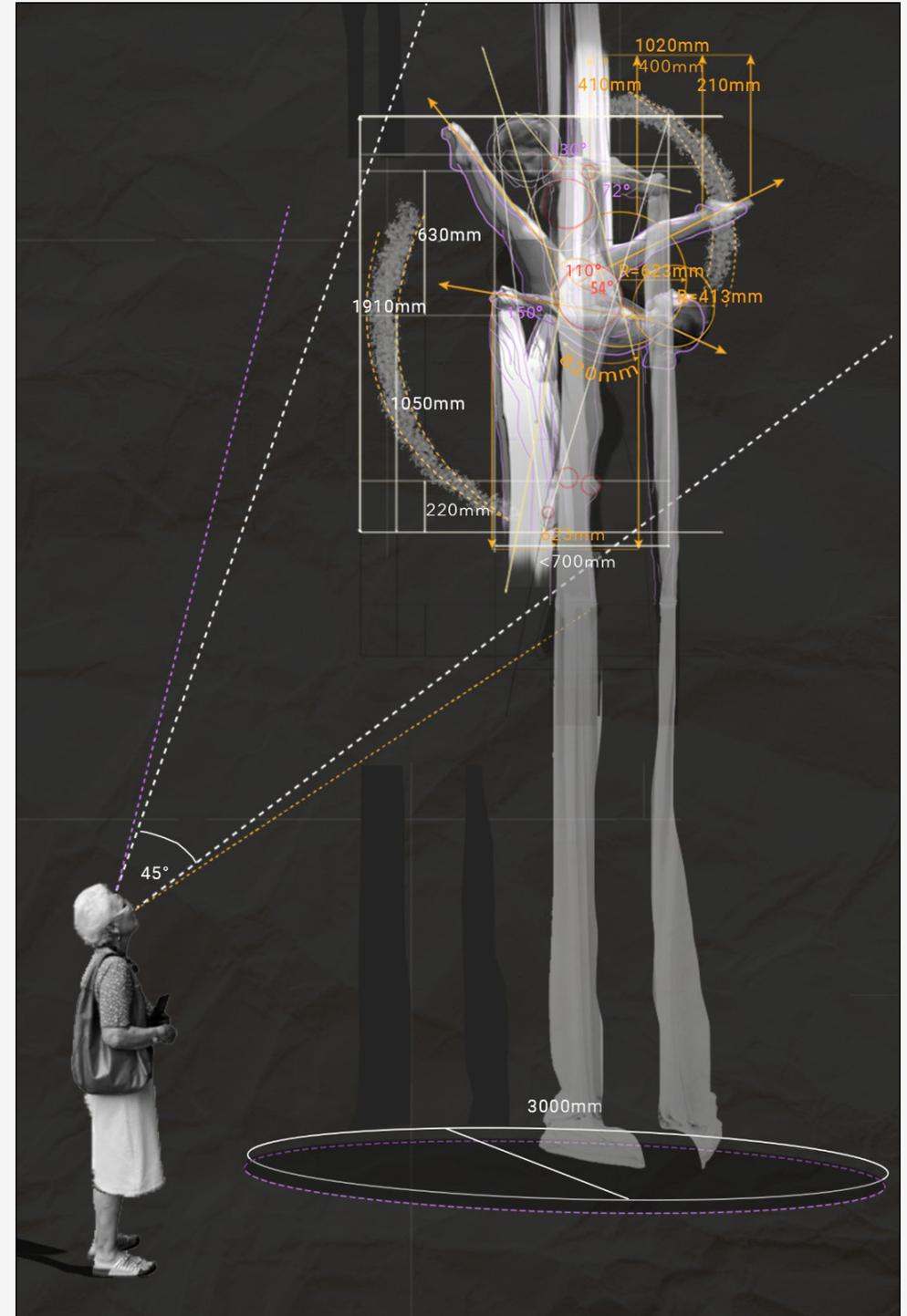


Figure 15: Top left - Hand drawn ergonomic plan drawings for aerial silks.

Figure 16: Bottom left - Hand drawn step-by-step for aerial silks.

Figure 17: Right - Digitally collaged ergonomic elevation study for aerial silks performance act.



ABOUT

Each year the MSA Live (formerly Events) programme unites M Arch. year 01 with B Arch. year 01 and 02 and M Land. Arch 01 in mixed-year teams to undertake live projects with external partners to create social impact.

LIVE PROJECTS

All MSA Live projects are live. A live project is where an educational organisation and an external partner develop a brief, timescale, and outcome for their mutual benefit.

SOCIAL IMPACT

All MSA Live projects have social impact. Social impact is the effect an organization's actions have on the well-being of a community. Our agendas are set by our external collaborators.

EXTERNAL PARTNERS

MSA LIVE projects work with many organisations: charities, community groups, social enterprises, community interest companies, researchers, practitioners and educators.

STUDENT-LED

Our MSA masters students take the lead in the project conception, brief development, delivery and co-ordination of a small project. Other cohorts join for an eventful 2 weeks of activities at the end of the academic year.

KNOWLEDGE TRANSFER

Working in teams within and across year groups and courses; MSA students participate in peer to peer learning. In addition, collaborators, participants and students engage in the transfer of tangible and intellectual property, expertise, learning and skills.

LARGE SCALE

This year approximately 600 students from 4 cohorts in MSA will work on 42 projects with partners.

QUESTIONS

For questions about MSA Live 21 contact MSA Live Lead: Becky Sobell:
b.sobell@mmu.ac.uk

BLOG

live.msa.ac.uk/2021

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