



play for a better tomorrow

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INDEX

5	INTRODUCTION	23	Actions Manual
	Project Description	24	<i>General Instructions</i>
		25	<i>Action Categories</i>
			<i>Action Instructions</i>
6	Background of the Project	26	<i>Action Information</i>
	Ability to Change	27	<i>Guides</i>
	Consumer Habits		
	Overload of Information	28	Game Contents
7	Paradox of Warnings		Tone of Voice
	Issue of Time and Scale		
8	RESEARCH	29	DESIGN
	Role of the Designer		Branding
			Naming
			Logo
	Sustainability and Design	30	Typography
9	Sustainable Design References		Colours
	<i>No Planet No Fun</i>	31	Illustration Style
10	<i>Do the Green Thing</i>		
	<i>The World of 100 Postcards</i>		Materials and Production
11	<i>Ein Guter Tag hat 100 Punkte</i>		Board
			Manual
12	Designing for Children		Magnets
	Target Groups	32	Packaging
13	Learning approach in early childhood		
14	<i>Children aged 6-7</i>	34	Social Media
	<i>Children aged 8-9</i>		
	<i>Children aged 10-12</i>		
15	PROJECT	35	VISION
	Challenge	36	SOURCES
	Storyline		Bibliography
			Sitography
	Game Mechanics		
	Magnetic Board		
16	49 Puzzle Magnets		
17	<i>Action Icons</i>		
20	<i>Puzzle</i>		

“Change only happens when individuals take action.”

Aliya Haq, deputy director of NRDC’s Clean Power Plan initiative, July 17, 2017.

INTRODUCTION

Project Description

We all share the same planet so every choice we make in our environment may affect others far away in space and time. Living sustainably on this planet is a necessary challenge for all of us, which, however, sometimes seems too big, hard and overwhelming for an individual. Nevertheless, even on a small scale each individual's action may have a big impact on our planet if we work together for a better future. How and where to start?

As a designer, I was wondering how I could contribute to a change in our lifestyle and thereby support the transition to a more sustainable daily routine. I started researching about which factors can support change and identified the following aspects:

1. Social interaction often spurs us to become a better version of ourselves in order to make a good social impression and to show people our best achievements. In addition, collaboration between people makes them feel part of a bigger community.
2. Immediate rewards (rather now than in the future) are important to highlight the progress and not the decline.¹
3. Fun is often a strong incentive.

As a next step, I needed a specific target group to address, and a suitable project that would include these three factors in order to impact the transition to a more sustainable lifestyle.

Time is running fast and our call for action set up by the 17 Sustainable Development Goals by the United Nations General assembly has its deadline in 2030.² Educating the young generations to change their lifestyle is certainly an urgent goal. However, this alone, would mean waiting too long to be effective. As a result, I detected the urgent need to address both the generation of parents and children. They will encourage each other to succeed with this challenge: On the one hand to understand, teach and guide (parent's role), and on the other hand to play, learn and motivate (children's role). My target group covers families already interested in the topic of sustainability, with at least one child in elementary school (6-12 years old). During my research, I came to the conclusion that children at this age are old enough to understand and learn about a more sustainable lifestyle.

A game seemed like the perfect medium to help these families to change: Often lacking time and motivation, a game can be a fun tool to effortlessly embrace sustainability in their lives, despite the lack of time and motivation. Games are fun, have rules and goals, practice and interaction; they aim to challenge, stimulate and educate.³ These are all necessary factors involved in the process of change.

The result is *Memini*, an educational family game with 49 mini actions, which are fun, informative and will joyfully change a family's lifestyle into a more sustainable one. The mini actions are challenges, activities and mini games which give

1. Sharot, Tali, 2014, October 28. From <https://www.youtube.com/watch?v=xp002vi8DX4>

2. From <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

3. From <https://en.wikipedia.org/wiki/Game>

the family a chance to play, learn and change many of its routines. The players experience and discover in a creative way how these mini actions can lead to big results into their everyday lives. These actions will also improve the quality of the time the family spends together. *Memini* is a game where all the players play, learn and change together in order to win a better future! Living more sustainably has never been so much fun!

Background of the Project

Ability to Change

One of the most fascinating aspects of human beings is our ability to adapt to change. We deal with change on a daily basis in various contexts, forms and times. Some changes are small and unconscious, some require much effort and thought.⁴ Human history can teach us how change has affected our lives and how inevitable it is for our survival. When we are engaged by a motive or a need, real or elusive, we tend to enjoy changing for the better. Most of the time the key is to focus on the positive parts, helping people to see what is interesting for them, instead of what is negative.⁵

Consumer Habits

We have a clear sense for the fact that our society, economy and lifestyle must change, but change is not happening at the speed which

would be required at this late stage. We are living in a time where the need of a change is indispensable. Nevertheless, we act like it is not. We are still behaving, consuming and producing beyond the earth's resource capacity and only few actors have already planned to change to a sustainable development direction. There is a paradox between environmental knowledge and environmental action: The majority sees climate change as a serious threat but only a minority takes real responsibility for their actions. This circle has deep roots in consumerism which keeps people constantly dissatisfied and induces them to measure happiness in terms of material possessions. The economy has to change from linear to circular and politics should recognise the importance that climate change deserves.

Overload of Information

There are other factors which induce us to turn passive. The analysis of how the climate change issue is treated by media highlights the reasons for our behaviour. We are overloaded with information and in consequence we only remember 1% of it in our short- or long-term memory. Although we already know much about climate change, we are still confused about the direct and indirect consequences that it will cause us. We experience this topic as impersonal and far away from us, which discourages us from action. The problem lies within lacking a direct connection between this huge, seemingly distant issue and our daily routine. Thus, the communication about climate change should ideally touch us emotionally and address issues in our daily life by using an understandable, clear language.⁶

4. Saddington, David, 2014, October 28. From <https://www.youtube.com/watch?v=7vnzKPq390Q>

5 Clarke, Jason, 2010, December 22. From <https://www.youtube.com/watch?v=vPhM8lxibSU>

6. Ehmann, Sven; Bohle, Stephan; Klanten, Robert, *Cause and Effect - Visualizing Sustainability* (Gestalten, Berlin, 2012), 6.

Paradox of Warnings

We are constantly bombed with warnings and negative information about climate change. As science has observed,⁷ warnings have limited impact on our behaviour when they try to scare us. If we get used to being constantly warned, threats will not have an impact at the end. In fact, they might lead to quite the opposite results; we try to ignore the problem and turn our heads to something more interesting for us. Moreover, if the threat is unclear, uncertain and far away, we tend to turn passive and ignore it. It then seems as if we have more urgent matters in our present to take care of. Only when the threat is in front of us, clear, close and recognisable, we react immediately to it.

Issue of Time and Scale

Our brains react to short-period changes but we barely perceive long-term changes. Climate change is slowly happening and that is also one of the reasons why we hardly perceive it and react to it. Why should we worry about something that is far away, can take many different paths or might not happen at all (climate deniers)?⁸

*If we think the consequences are far in the future, we tend to discount the risk. People just aren't going to inconvenience themselves unless they're forced to.*⁹

We find easy excuses to escape the action and our comforts often cause the contrary of our value. Additionally, depending on where we live,

we might think that the problem will not reach us, or that our country will be able to handle the consequences of climate instability.

What about those people who want to tackle climate change? The majority wants to make a contribution and certainly most of us want to live a more sustainable lifestyle. However, there are so many factors involved that we might feel overwhelmed by the problem's scale. How do we approach such a big and complex problem? Keeping ourselves informed as well as selecting reliable and accurate sources requires time and effort. The information is fragmented and often not exhaustive. Besides that, we need also a concrete range of solutions that we can achieve in our routine. *Memini* gives an unpretentious overview over sustainability, includes such specific small-scale solutions and sets a focus on the positive effects of actions. Every action matters and has a limited, but important impact on our future.

7. Sharot, Tali, 2014, October 28. From <https://www.youtube.com/watch?v=xp0O2vi8DX4>

8. From <https://www.youtube.com/watch?v=xp0O2vi8DX4>

9. Kluger, Jeffrey, 2018, October 8 From <https://time.com/5418690/why-ignore-climate-change-warnings-un-report/> (Kluger, Jeffrey, 2018, October 8)

RESEARCH

Role of the Designer

Designers will play a critical role in our society, both as agents of social change in a complex world and as leading architects of sustainable solutions for a troubled planet. Intensive research from University of Göttingen has shown, against any pessimistic prediction, that such a change in humankind behaviour is possible and doable within the planned timeline. Design and communication should convert their potential power in order to move emotionally people from a wasteful to a sustainable lifestyle and draw people's attention to a new quality of life in line with the sustainable development of society.¹⁰

Nowadays design should use its potential to inspire, engage and direct people towards a positive and desirable future in which people can identify themselves with. Designers need to sensitize people, offer guidance, generate enthusiasm and give a sense of belonging as well as motivation to take action. While providing essential information, design should avoid distant and abstract content. Instead, it should trigger people's humour and curiosity to integrate sustainability in their real-life-style.¹¹ Designers should make sustainable content attractive, make sustainable products even more desirable than not sustainable ones, break scepticism, drive alternative solutions to a "less-stuff-more-people world", gain a better quality of life, create awareness and society's interest towards climate change. This is the approach I embraced as a designer with my project *Memini*, my creative contribution to this cause.

10. Ehmann, Sven; Bohle, Stephan; Klanten, Robert, *Cause and Effect - Visualizing Sustainability* (Gestalten, Berlin, 2012), 2.

11. Ibid, 3.

Sustainability and Design

"Sustainability is the ability to exist constantly."¹² Recently, however, the meaning of sustainability changed: orient human development in harmony with nature, maintain the utilisation of natural resources and preserve the environment for future generations.¹³ Professionals are increasingly working to balance economic, social and natural needs by setting small goals that will not compromise the future.¹⁴

Working sustainably can be both extremely complicating and surprisingly simple. Communicating sustainability properly has not yet reached a broad part of society. In this regard, good design should found its structure on both conceptual and technical parts, should apply theory to practise and turn passivity into action. As a result, companies and designers need to work together to embrace sustainability. Design "has the potential of making topics of sustainability experienceable."¹⁵ The hard part does not consist of creating new strategies, but in leaving behind old models and routines, says John Maynard Keynes. He continues saying that the fundamental key to being successful in this matter will be to make correlations between people's habits, daily actions and their effect on the environment. "True change starts with little things, in the family, in one's direct surroundings; [...] A will only arise when people are moved by something — in their hearts."¹⁶ People need to experience prob-

12. From <https://en.wikipedia.org/wiki/Sustainability>

13. From <https://en.wikipedia.org/wiki/Sustainability>

14. Aaris, Sherin, *SustainAble: a Handbook of Materials and Applications for Graphic Designers and their Clients* (Rockport Publishers, Beverly, 2008), 12-13.

15. Ibid, 190.

16. Ibid, 190.

lems and be contagious enthusiasm carriers. *Memini* motivates the family to take tiny actions and offers an effortless, constructive experience of learning about the effect of these actions on the environment. In addition, it leads to change of many of its routines with fun, ease and creativity.

Sustainable Design References

There are already numerous design projects about sustainability. The following analysis is a well-thought-through collection of those which I found inspiring during the creative process of *Memini*.

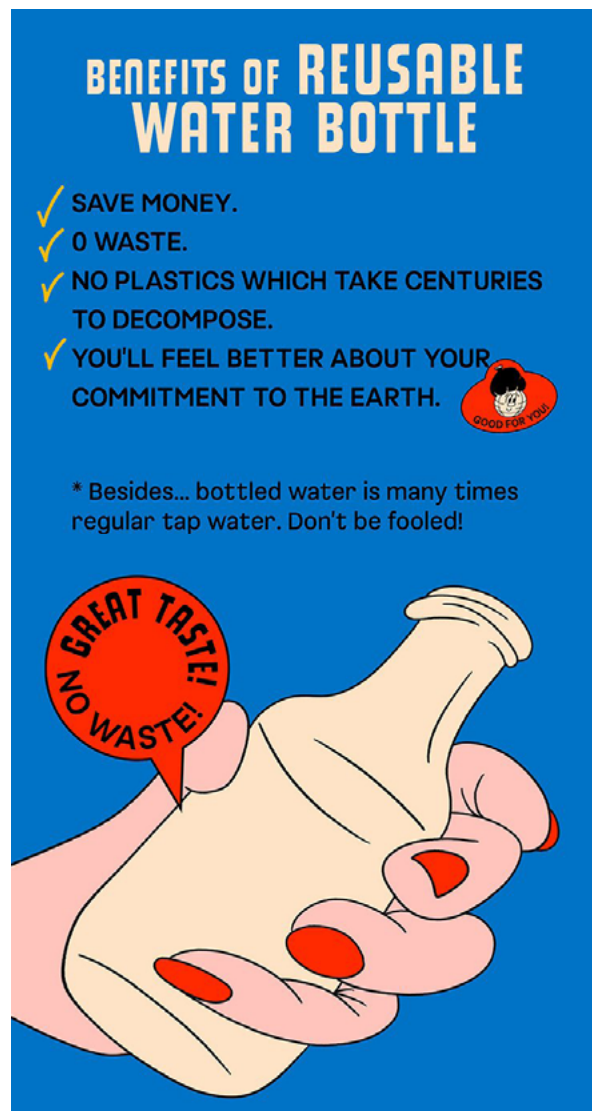
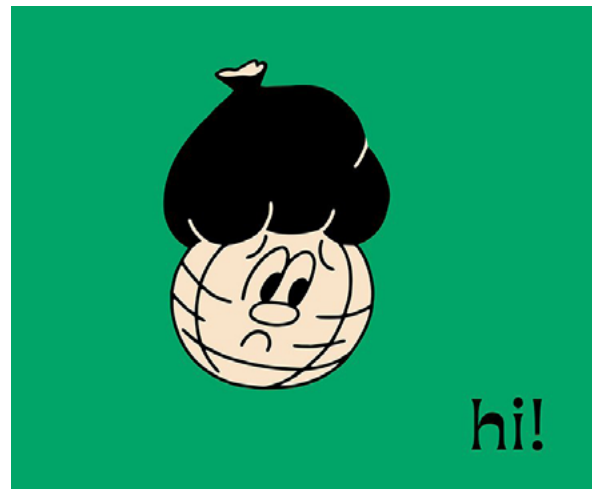
No Planet No Fun

Designers: Susie Hammer and Ro Ledesm

"We want to make people aware of how easy it is to help the planet by changing everyday habits and taking small actions. If we stay the same, things won't be the same."¹⁷ *No planet no fun* is an open call of action and positivity with a hint of irony; 44 international artists answered that call with illustrations about what they would miss if the world would end. A unique approach that fights the crisis with enthusiasm. "Many great sources of information can't reach a greater audience only for the fact that they're not attractive enough. We want to use design and illustration to share information in a friendly format, trying to be simple, yet seductive. No one wants to go through Instagram to look at depressing and boring chunks of information – or at least we don't."¹⁸

17. From <https://www.noplanetno.fun>

18. Bourton, Lucy, 2019, August 13. From <https://www.itsnicethat.com/articles/no-planet-no-fun-illustration-130819>



No Planet No Fun, Instagram Campaign.

Ein Guter Tag hat 100 Punkte

Designers: Kairos, Integral Ruedi Baur

Many different applications track your daily consumption and help you better to deal with a sustainable lifestyle. A well-thought one is the web-site-application Ein Guter Tag hat 100 Punkte.²³ It challenges the users to calculate their CO₂ emissions of their daily activities. A good day should have 100 points. There is a database of products and activities which have an assigned number of points; by balancing your choices you should always stay within these 100 points.²⁴ It is a great exercise to "break with what people expect to find and challenge their expectations by capturing some part of what is familiar in a different contact or environment."²⁵



23. From <https://www.eingutertag.org/de/warum-68kg-co2-eq.html>

24. Aaris, Sherin, *SustainAble: a Handbook of Materials and Applications for Graphic Designers and their Cients* (Rockport Publishers, Beverly, 2008), 139.

25. Ibid, 131.



Ein Guter Tag hat 100 Punkte, Application.

Designing for Children

In the context of sustainability, design meant to address children has an essential role to prepare the child to his future, discover the relation with others and improve physical and psychological skills. Depending on the impulses perceived, many different possibilities of development are opened. Yet, the most important impulse comes from adults, their interaction with the child and the environment. Play significantly forms the future consumers that later will shape the environment and the society.²⁶ Through play, children learn to learn. But, learning that something is important is not enough, the child should experience it.²⁷ In this regard, *Memini* helps the child to better understand and experience its surroundings, to perceive and observe them, stimulating its creativity and building a timeless process of learning.²⁸

Memini actions take daily life raw materials and transform them into an adventurous, playful experience. *Memini* aims to educate, motivate and stimulate an indirect perception of routine, duties and rights. Each *Memini* action follows a specific structure: a topic, a task with spatio-temporal and environmental factors, and the effect of having fulfilled that task in real life. Play has the power to reflect reality in a way that children in early age take possession of social functions with pleasure.²⁹ They learn that wishes cannot be gained at will, that action is necessary to overcome failures and

obstacles, that you are not always the winner — and that winning is not always the most important goal. Children learn to behave. While playing *Memini*, the children experience that winning is a benefit for the whole family (and for the planet). *Memini* is a coherent, educational game, harmonic in content, mechanics, material and graphics.³⁰

Educational games need the right level of playfulness, parent friendliness and education: They should engage adults and be fun for children. If a game achieves both goals, the reliability is strong.³¹ *Memini* bundles many factors in one product: it promotes awareness, challenges the players in various contexts, develops imagination, teaches about sustainability and aims to bring about change.

Target Groups

According to the European Commission in 2019, it took a long time to have climate change becoming part of cultural dialogue. Nowadays, 93% of European citizens think climate change is the second most serious problem (at first place is poverty, hunger and lack of drinking water which is also partially connected to climate change). This percentage is divided in two groups:

— 60% of citizens have already taken action to tackle climate change, mostly reducing waste and separating from recycling waste when possible (75%) and, reducing energy (63%), water (55%) and disposable items consumption (62%). The most common is avoiding plastic bags and

26. Grunfeld, Frederic V., *Games of the World, how to make them, how to play them, how to come to be* (Unicef, Zurich 1982), 11.

27. Ibid, 63.

28. Otto, Karlheinz; Schmidt, Käthe; Sotamaa, Yrjö; Salovaara, Juhani (edited by), *Playthings for Play, ideas of criteria on children's playthings* (Ornato, Finland), 47-49.

29. Ibid, 21, 88.

30. Ibid, 26, 53.

31. Ibid, 130.

packaging.³² A smaller percentage would prefer eco-friendly transport alternatives (28%), an environmentally friendly car (20%), would rethink food and items shopping (for example choosing seasonal food or products that have not been transported long-distance) and would prefer greener energy tariff or supplier (9%).³³ Although this group of citizens said they have already taken sustainable measures, we need to consider that this might include different ways of practice: Some might do it regularly and massively, some others barely and rarely.

— 33% of European citizens think that climate change is a serious problem but did not take any action to fight it: They think that it would be too expensive, not effective or they do not know how.³⁴

Past surveys show that age also plays an important role in this issue: Older Europeans often seem to underestimate the problem of climate change. When it comes to taking personal action, however, the least active ones are those part of the youngest generations. The latter consider climate change a serious but unstoppable problem.³⁵ Furthermore, those who are still living with their parents do not feel entirely responsible for rules at home, and consequently do not take action themselves.³⁶ That shows how important children's education is in this matter (domestic rules, habits and parents guidance). Nelson Mandela says that education is a powerful tool which can be used to change the world. Once a child has received cer-

tain messages at learning age, this will influence its future life choices. A good process of learning of a child passes through play, guidance and participation of adults.³⁷ So, to address both adults and children at learning age, my target group consists of communities of families with at least one child aged 6-12.

Learning approach in early childhood

In pre-school and primary school, performative and memory processes, as well as cognitive skills are more effectively gained through a didactic play than other kinds of activities.

At this age, a child is more oriented towards maintaining social relationships and coordinating group-related activities and it can arrange itself in a relation with others. Even though a child needs time to process impulses and experiences, it can creatively deal with a complicated long-term situation. That's also why *Memini* is a long-term game, which can require up to a couple of weeks to be completed. However, the game speed depends on the family.³⁸

Playing with the family can lead to a gradual independence of the child. A child is curious about adult life. However, in order to be understood, reality has to be translated into something else. Therefore, a child requires guidance of parents to open up for more possibilities and encourage its imagination during the game. Play becomes one of the possible mediators between reality and imagination.³⁹

32. Special Eurobarometer 490, European Commission, 2019,

3. European Commission, 2009, From https://ec.europa.eu/clima/sites/clima/files/support/docs/report_2019_en.pdf

33. European Commission, 2019, 66. From https://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_322_en.pdf.

34. Ehmann, Sven; Bohle, Stephan; Klanten, Robert, *Cause and Effect - Visualizing Sustainability* (Gestalten, Berlin, 2012), 64.

35. European Commission, 2009, 87.

36. European Commission, 2019, 34.

37. Otto, Karlheinz; Schmidt, Käthe; Sotamaa, Yrjö; Salovaara, Juhani (edited by), *Playthings for Play, ideas of criteria on children's playthings* (Ornato, Finland), 72.

38. Ibid, 28, 32, 93.

39. Ibid, 33, 69, 72.

Children aged 6-7

Children at this age are active, verbal and competitive, especially during game activities (like 'who can run faster'). They can be asked for 'how much, how often, how many'. They like to be challenged and timed during activities to measure their improvement. There is more empathy for and commitment to others, so they cooperate well in teams with the help of adult intervention. They can wait more patiently for gratification due to a better understanding of time and can maintain collections and puzzles. Therefore, *Memini* is based on collaboration and interaction of players to slowly collect all the puzzle pieces. Children love tessellations and patterns. The puzzle designed for *Memini* is based on that.

Designing for this age can include more complex text; children like to discuss and express themselves. The *Memini* actions open up for a dialogue about sustainable topics and are based on family routines.⁴⁰

Children aged 8-9

At this age, design permits complex interactive experience. Children's knowledge allows a sense of humour and an interest in absurdity. The illustrations used for *Memini* are based on absurd colours and humorous combinations of living beings. Children at that age are active but also enjoy more sedentary activities, like crafting and keeping track of their progress. They are very good team players, enjoy pairing activities and playing with rules. They can respect other's space and are better at dealing with emotions and abstraction. All these factors are considered in the content of *Memini* actions.

Children at this age can put together different parts of an image and the composition can contain many details. *Memini* puzzle allows for infinite outcomes of composition, where the players have the freedom to put together their own version. Yet, it will be full of fitting details. Games can last longer and can be more sophisticated, with more text and pictures, more elaborated ways of counting and timing (in addition or subtraction), as well as including mental manipulation of space and quantities. Children aged 8-9 have a better understanding of a natural environment and how it works; *Memini* puzzle portrays a happy, equal, natural world.⁴¹

Children aged 10-12

Children at this age have a deeper understanding of how our world works. They start to feel closer to certain matters, to have an active role in social issues and think several steps ahead in "what-if"-scenarios. More complex puzzles and long term games are welcome, however, referring to the present time is more effective in order to motivate action. They experience the present in a constant change.⁴² They like the unexpected in the familiar. *Memini* puzzle shows living figures, which, however, have unexpected colours and do unexpected things. For kids in this age group the content of a game/puzzle needs to be relevant and close to their lives. *Memini* refers to real-life actions, which the players would consider relevant for their lives.

40. Fishel, Catharine, *Designing for Children - Marketing Design That Speaks to Kids* (Gloucester, Rockport Publishers, 2001), 101.

41. Ibid, 124.

42. Ibid, 141.

PROJECT

Challenge

My challenge is to motivate with fun, bring awareness about sustainable choices, challenge real problematics of everyday life and using collaboration in order to achieve results. The game should generate positive emotions: optimism, enthusiasm, pleasure, curiosity, creativity, satisfaction, pride, empowerment, caring, sense of contribution, appreciation, empathy, responsibility, consciousness and belonging.

Furthermore, the game should identify the family as the subject: How the family members live and how they spend time together. *Memini* actions should embrace an hypothetical family lifestyle context. Children will be more engaged by the play, parents will offer their guidance by understanding and mediating the topics, and together they will learn how to change. *Memini* should not only improve the quality of family time, but also the sense of belonging to a bigger community.

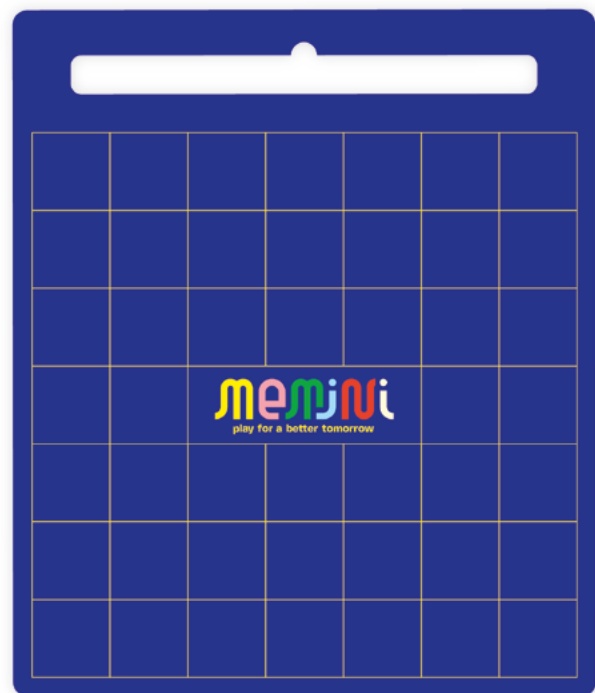
Storyline

Memini is an educational family game where the players are challenged with 49 mini actions to build up their own creative way to live more sustainably on the planet, share available resources fairly and take care about each other. A family will play, learn and experience together how playful it can be to slowly change its lifestyle to a more sustainable one. *Memini*, play for a better tomorrow!

Game Mechanics

Magnetic Board

The magnetic board is designed to offer a grid to arrange the 49 puzzle magnets. It has a cut space on top to easily grab it or hang it on the wall. The front is very simple, because it is most of the time covered by the magnets.



Magnetic Board, Front, 265x225x3 mm.

The backside is covered with a joyful portrait of all living beings: It could become a decorative memory in a children's room, once the game is completed.

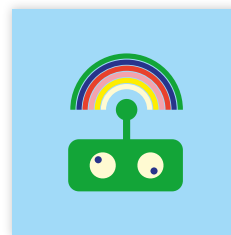


Magnetic Board, Back, 265x225x3 mm.

49 Puzzle Magnets

The 49 puzzle magnets are double-sided: One side of the magnet shows one icon of any actions (action icon) and the other side shows one piece of the puzzle. The difference between the two sides is made clear by the design: The action icons are centred, have space around the frame and they do not touch the edges. The figures of the puzzle are always cut on the edges.

One Magnet, 30x30x2 mm, real size.



Action Icon, Front.



Puzzle Piece, Back.

Action Icons

The set of the 49 icons represents the beginning state of the game. The icons welcome the players to the game and engage them to play, encouraged by curiosity.

49 Action Icons, real size.



Yet, the players do not know what the mini actions consist of. The icons give a humorous hint about the action topic without being too descriptive.

In order to fully understand the icons, the players have to read the titles and the instructions.

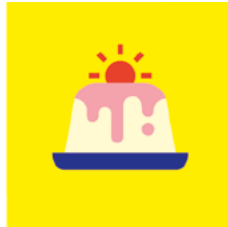
Post of Hope



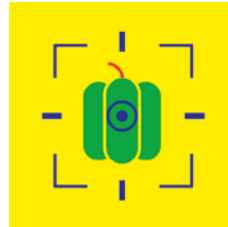
Freezer Eats Fruits



Delicious Season



Food Hunt



Veggies-Fruits Theatre



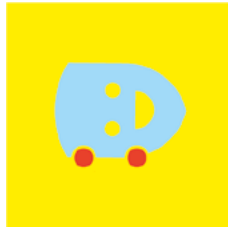
Fridge Police



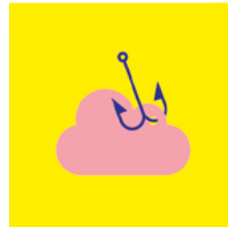
Seasonal Truck



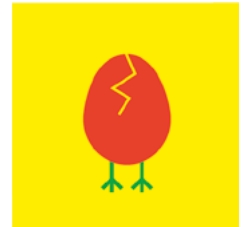
Means of Transport Mime



Stuck in the Air



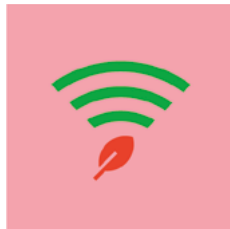
Once Upon a Meat



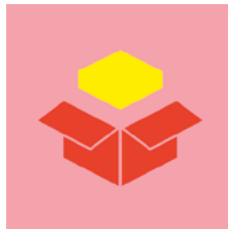
Think Differently



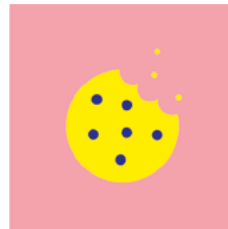
Greenternet



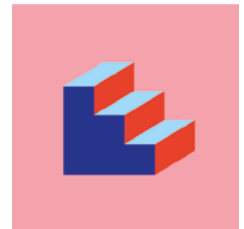
Look Inside the Pack



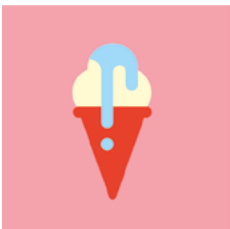
Sweet Snack



Mind Your Steps



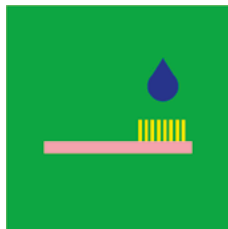
Without Plastic It's Fantastic



Online vs Offline



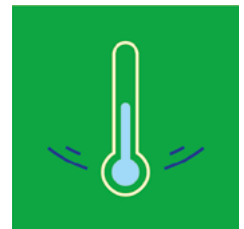
10 Seconds Waterfall



Leaking Drops



Warm-Cool Swing



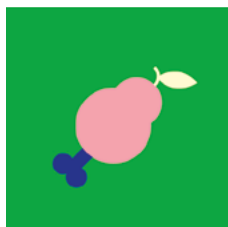
Standby Mode



Flash Shower



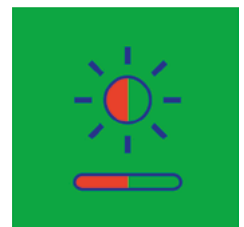
Meatless Meat

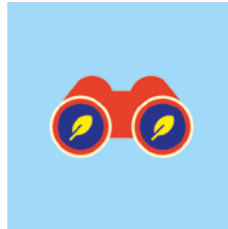
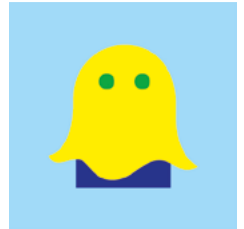
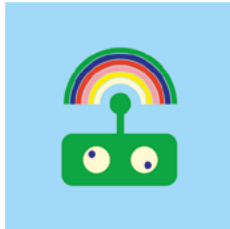
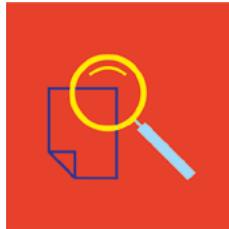
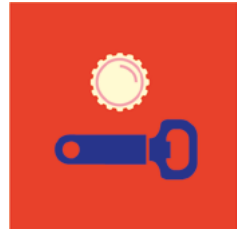
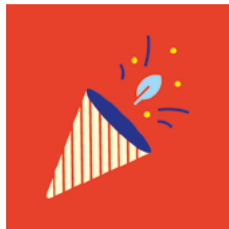
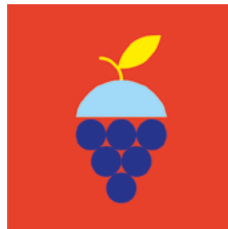
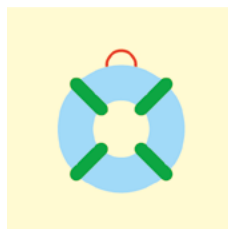


Car Free



Twilight Contest



Firefly Dance*Eco Trip**Gentle Reminder**Treasure Explore**Forgotten Ghosts**Reshape**Rainbow Pile**Paper Detective**Magic Veggie Wizard**Battle of Bottle Caps**Infinite Bottle**Towel Duel**Sustainable Celebration**Leftover not Over**Cards Basket**Bin Eats Materials**Label to Recycle**Paper Balls Duel**Waste Rescue**Letter Chain**Mission: Reanimation**Create Your Missing Piece**Patch up**Recovery Treasure Hunt*

Puzzle

The puzzle represents a motivation to play, a reward and the final state of the game. Finally, after a long adventure and a great deal of expectations, the players will experience the joy of having accomplished all 49 mini actions. They are at the end of their patient journey, full of knowledge, awareness and experience. Only now, the players realise

the biggest accomplishment of the 49 tasks: They have contributed to making the world a better place. Nature, human and animal figures are all connected and depending on each other, but they still keep their diversity and their individuality. 100 illustrations are composing a detailed joyful final image that will stick to the players' memory.

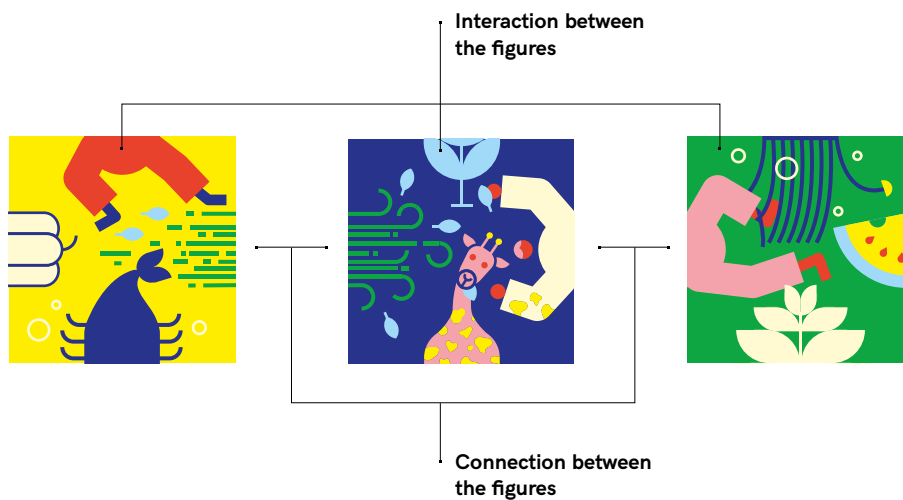
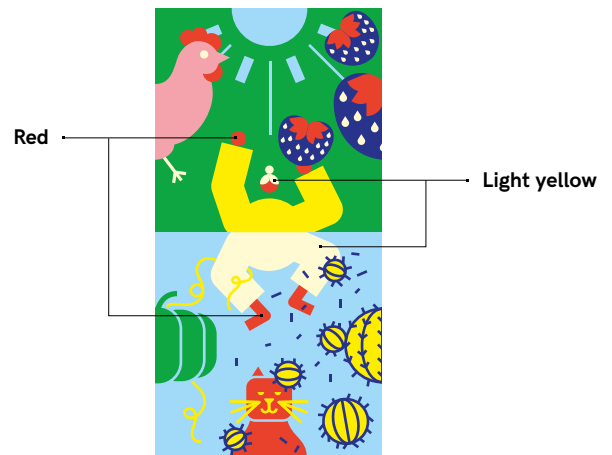
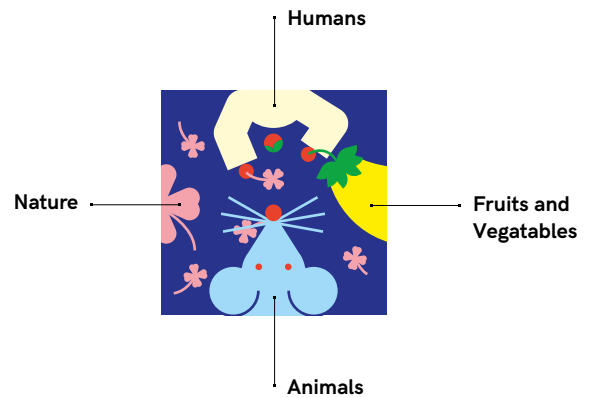
Complete Puzzle, 49 pieces, real size.



Each piece of the puzzle illustrates four figures cut on each side. The figures belong to four categories, namely human beings, elements of nature, animals, fruits and vegetables.

In every piece of the puzzle, these four figures interact with each other and tell a little funny story. The complexity of each composition spurs the players to find the next pieces of the puzzle to find out the connections between the figures.

All the figures are different, except for the human beings, who only change their colours. This choice was mainly made to make the puzzle slightly harder to complete. At first sight, there does not seem to be a way to find out which top part belongs to which bottom part. However, the game includes a little trick, which players can discover in the course of the game: The colour of the legs and feet is identical to the colour of the skin and the hair of the human figures.



Figures Categories.

Identical colours in human figures.

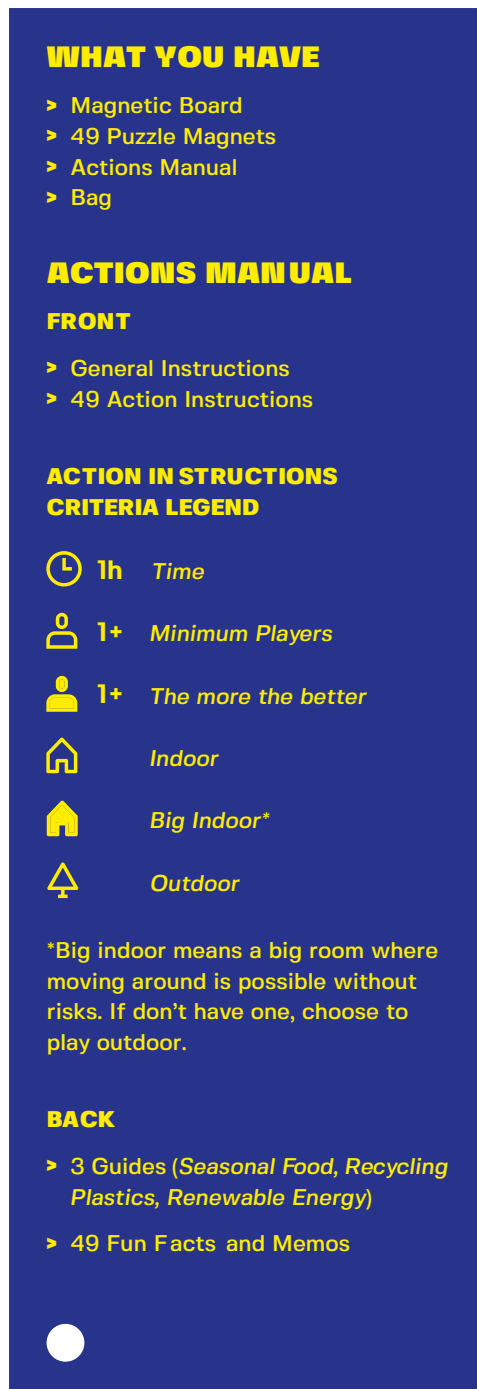
Interaction and connection between the figures.



Actions Manual

The actions manual shows the general instruction and the 49 action instructions in the front. The actions information about their effects and three guides about specific sustainable topics can be found on the back of the manual. Even after the game is completed, the manual remains a valid tool for information and re-play.





Actions Manual Content, 184x63 mm, real size.

General Instructions

Players

Memini is a game for a family with at least one player aged 6-12. Players of all ages who want to join in are welcome, even only for a single action.

Setup

Choose a spot where your board can be hanged or placed for the entire duration of the game. From there, you should be able to easily take it and put it back. The time required for playing all 49 mini actions depends on how fast you choose to proceed. Choose a time of the day when you are all together, take the board and the actions manual to start playing. Remember that each time you play, you can play as many actions as you like. Now you are ready to begin!

How to play

Randomly choose one action in the actions manual to start the game. Next, read the instructions and play the action as a group. Once you have completed your action, search for the identical icon, which you find on the top left of your action instructions, on your board. Turn this magnet to uncover the other side and put it on the board again. CONGRATULATIONS! You have won the first piece of your puzzle! Proceed in the same way for as long as you like. Remember to read about the effects of your actions (fun facts and memos) on the back of the actions manual.

While playing you may move the puzzle magnets you have got to try out possible combinations of the figures. Once you have played all 49 actions and have turned all the puzzle magnets, arrange them to complete your wonderful puzzle! The puzzle forms a 7x7 square. While trying to match the figures, keep in mind that not all of them complement each other, even if it gives the impression. Remember that after the puzzle is completed, you might like to do your personal versions and invent funny creatures (e.g. a sheep with human legs).

What's next

Once you have experienced all your mini actions, *Memini* has fulfilled its purpose. You could reuse the bag, put the magnets on any metallic surface and the back of the board as a beautiful memory in your room. Or you could regift *Memini* to another family to give them the opportunity to discover how their mini actions can bring big results.

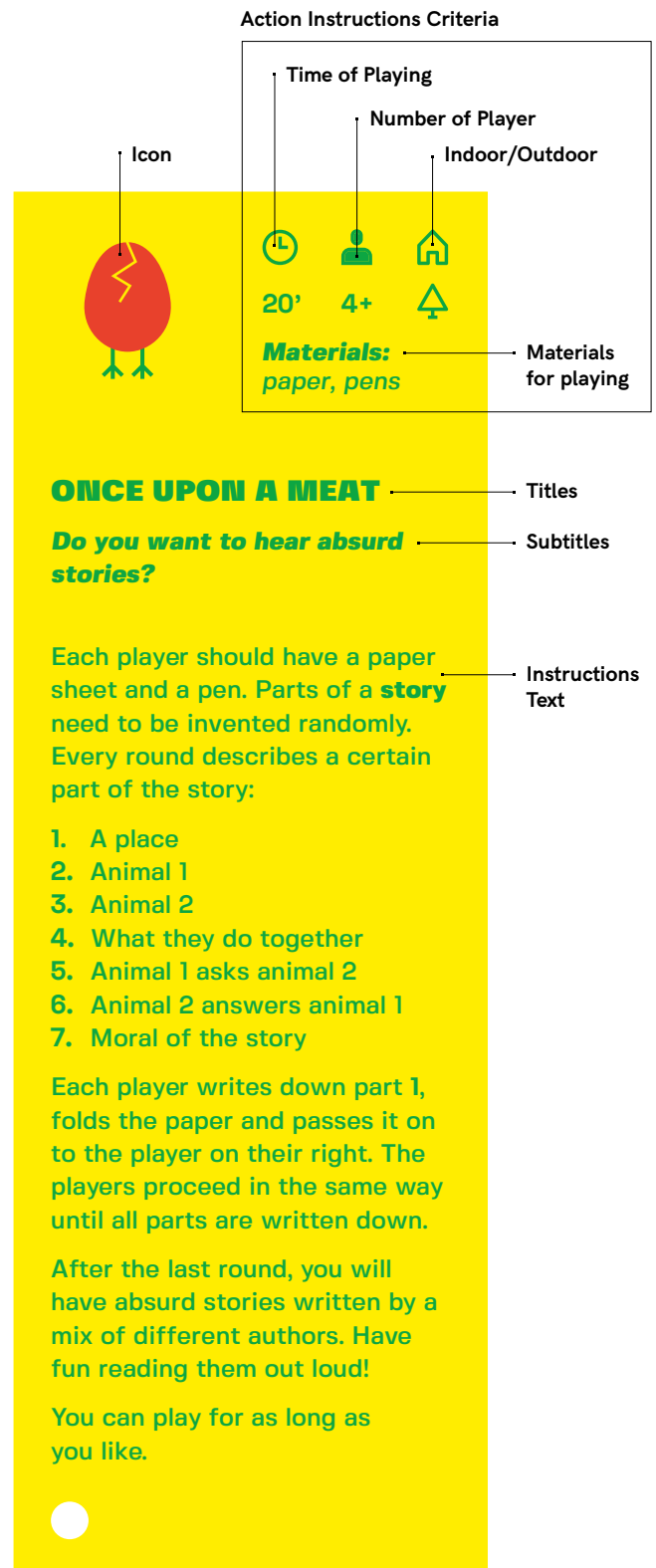
Action Categories

Each of the seven categories of actions has its own introductions. It will inform the players about the topic of the related actions. To do so, it contains descriptive text and all the icons of that category. Every category has its specific background colour, so all the actions of that section have the same colour.



Action Instructions

The action instructions content consists of three sections: the action icon, the action instructions criteria and the instructions text. The following image shows the structure of an individual action instructions in detail:



Action Information

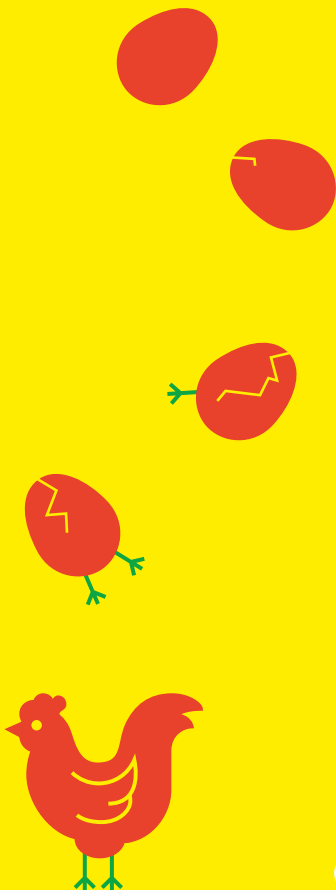
On the back of each action instructions the players find action information, for instance fun facts and/or memos. The fun facts show data related to the action or positive consequences of that action (when possible, actions and consequences have the same scale). The memos are reminders of good practice. Additional illustrations are used to easily recognise which action the information refers to, as well as to engage children's curiosity.

ONCE UPON A MEAT

MEMO

It's important to remember that animals are living beings. They all have a story that should be considered.

Be respectful if you consume any kind of meat/fish. Whenever possible avoid its consumption.



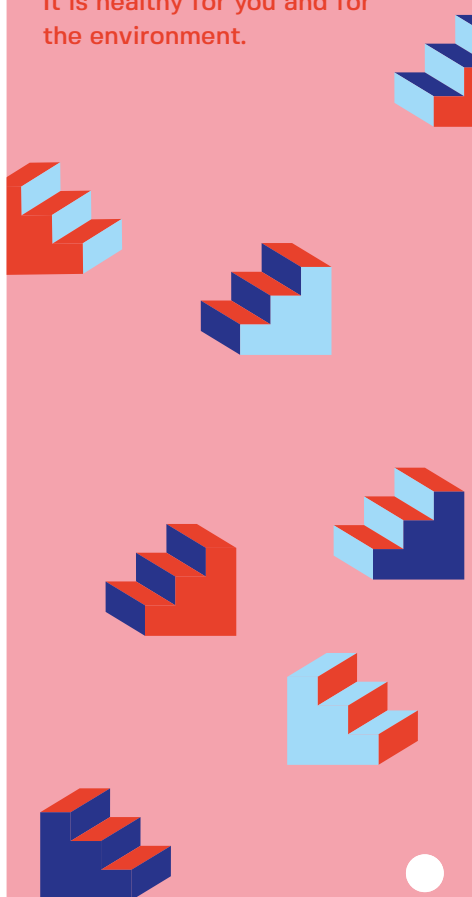
MIND YOUR STEPS

FUN FACT

By choosing to walk up the stairs you can save up to 120 kg CO₂ emissions per year (the quantity of 240 bathtubs).

MEMO

Burn calories not electricity. It is healthy for you and for the environment.



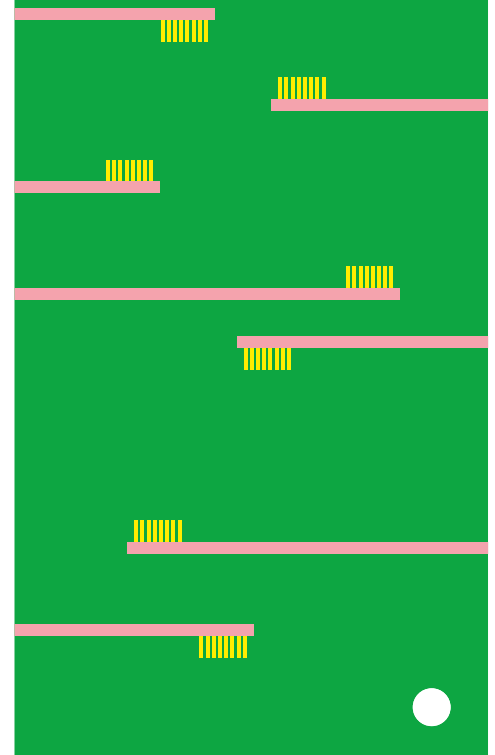
10 SECONDS WATERFALL

FUN FACT

A running tap uses up to 5 litres of water every minute.

Every time you brush your teeth for 2-3 minutes and turn off the tap in the mean time, you might save up to 10-15 litres of water at the time.

If it becomes a habit, you may save up to 5000 litres of water (a small private pool) per year!



Guides

In addition, the manual includes three guides on the back of the manual. Those guides have the purpose to give more detailed information about seasonal food, recycling plastics and renewable energy. I picked those three topics since I found that those were the ones which people often are confused about. The guides also help during the play of some specific actions.

SEASONAL FOOD GUIDE

FALL

VEGGIE

Broccoli
Cauliflower
Ginger
Green beans
Kohlrabi
Mushrooms
Peas
Pumpkin
Spinach
Radish

FRUITS

Apples
Bananas
Cranberries
Grapes
Kiwi
Lemons
Mangos
Pears
Pineapples
Raspberries

WINTER

VEGGIE

Artichokes
Cabbage
Carrots
Celery
Fennel
Kale
Leek
Onions
Potatoes
Pumpkin

FRUITS

Apples
Bananas
Grapefruits
Kiwi
Lemons
Mandarins
Oranges
Pears
Pineapples
Pomegranates

RECYCLING PLASTICS GUIDE

The SPI implemented a system to sort out the different types of plastics: The numbers indicate the grade of plastic.

1 - PET (*do not reuse — easy to recycle*) Beverage bottles, cups, packaging.

2 - HDPE (*reusable — difficult to recycle*) beauty care bottles, cups, milk jugs.

3 - PVC (*do not reuse — difficult to recycle*) pipes, siding, flooring, toys, furniture.

4 - LDPE (*reusable — difficult to recycle*) plastic bags, wraps, tubing, six-pack rings.

5 - PP (*reusable — easy to recycle*) auto parts, industrial fibres, food containers (yogurt and sauce).

6 - PS (*avoid use — difficult to recycle*) plastic utensils, styrofoam, cafeteria trays.

7 - PLA (*do not reuse — difficult to recycle*) mixture of any plastics, other plastics (acrylic, nylon, polycarbonate).

RENEWABLE ENERGY GUIDE

Wind energy > the energy obtained from the wind.

Solar energy > the energy obtained from the sun. The main technologies here are solar photovoltaic (using the light from the sun) and solar thermal (using the sun's heat).

Hydraulic or hydroelectric energy > energy obtained from rivers and other freshwater currents.

Biomass and biogas > energy extracted from organic materials.

Geothermal energy > heat energy from inside the Earth.

Tidal energy > energy obtained from the tides.

Wave energy > energy obtained from ocean waves.

Bioethanol > organic fuel suitable for vehicles and obtained from fermentation of vegetation.

Biodiesel > organic fuel for vehicles, among other applications, obtained from vegetable oils.

Game Contents

The content of the 49 mini actions covers different sustainable topics: energy, water, food and object consumption, waste, recycling and daily habits. These topics are packed in 49 sustainable actions and grouped into seven different categories (the core values of sustainable practise):

Rethink (11 actions)

Observe, understand and consider your lifestyle from a sustainable perspective.

Reduce (11 actions)

Consume less energy and materials.

Reuse (8 actions)

Use something more often, whether for its original purpose or not a different one.

Refuse (6 actions)

Don't consume what you don't need.

Recycle (5 actions)

Convert waste into new materials/objects.

Repair (4 actions)

Fix or upgrade your objects rather than throw them away.

Regift (4 actions)

Share things you don't use anymore.

What are the 49 mini actions?

The actions consist of challenges, activities and mini games. Challenges have a winning player, a winning team or sometimes all the players need to cooperate to win. Activities aim at fulfilling a task in a creative way. Mini games are existing games re-adapted to a topic related to sustainability. The titles of the mini actions use humour and curiosity to invite people to play. The subtitles deepen the topic with a question or an exclamation. The text explains the action instructions.

Tone of Voice

The tone of voice serves an essential role. Making the information emotional and personal is the basic precondition to engage people and trigger their curiosity. The content should inform with an attractive, exciting, involving language and create true empathy with the users.⁴³ *Memini* uses a clear, simple and positive tone, even about negative information: The consequences of climate change are important to know but people also need to be informed about that they can make a difference when they take action. Using a direct language helps to establish a relationship with the players, especially with children. There shall be no talking down, but straight-forward messages, which bring the issues to the point. Mostly addressing players with *you* shall help to increase the player's involvement. Children want to be part of the conversation, they want their opinion to be heard and be involved in important matters. Last but not least, it should always sound fun.⁴⁴

43. Ehmann, Sven; Bohle, Stephan; Klanten, Robert, *Cause and Effect - Visualizing Sustainability* (Gestalten, Berlin, 2012), 65.

44. Fishel, Catharine, *Designing for children - Marketing Design That Speaks to Kids* (Gloucester, Rockport Publishers, 2001), 101, 104, 113.

THE DESIGN

Branding

Naming

Memini comes from the latin word *memón- ("to remember"), perfect of the root *men- ("to think"), and from mēns ("mind"). *Memini* means 'I remember', 'I am mindful of', 'I keep in mind'.

The meaning is exactly what the game is about: I think, I remember and I mind about this cause.

The naming also contains mini, which refers to the mini actions of the game.

Logo

The logo concept is based on the idea of community, connection, togetherness, belonging, care and diversity. Each character interacts with the next one and influences its path. Nevertheless, they still keep their individuality, as they do not touch or overlap. The result is a connected, smooth and open logo where all the characters work together and help each other to proceed.

The claim 'play for a better tomorrow' communicates the aim of the game, what users play for a better tomorrow. It sounds joyful and effortless. The claim does not fall into the cliché traps: Often in this field, the first goal is to help our planet, but actually we help ourselves to have a better life and consequently help our planet. We all benefit and win if we maintain the world's natural resources and aim for a more sustainable lifestyle.



Logo.

Typography

The typography needs to be easily to read in order to address children in elementary school. For the text I chose a grotesque font that is very legible but keeps its own peculiarities. *Fivo Sans* fits the informative character of the content, while at the same time communicating playfulness. Designed by Alex Slobzheninov, this is a free neo-grotesque typeface. *Fivo Sans* (Medium) is neutral, strong and simple, which makes it perfectly suitable for texts. For the headlines, I opt for *Fivo Sans Modern* (Extra Black).

Fivo Sans Medium

abcdefghijklmn
opqrstuvwxyz
ABCDEFGHIJKLMN
OPQRSTUVWXYZ

Fivo Sans Modern Extra Black

**abcdefghijklmn
opqrstuvwxyz
ABCDEFGHIJKLMN
OPQRSTUVWXYZ**

Colours

Colours have an important task in this game, serving different uses:

- Communicate fun and positivity
- Intrigue curiosity
- Suggest absurdity
- Have high contrast
- Be bright and harmonic
- Interesting combinations of different amounts of colours
- Adapt to various shapes (thin, thick, full, empty)
- and applications (text, illustration, background)
- Support text readability

The result is a palette of seven bright pop colours, relating to the seven values of sustainability. They are combined in a way that does not reflect colours as we know them in real life. Clouds are pink, cherries are green, the sun is light blue etc. This absurdity of colours gives a playful look to the overall design.

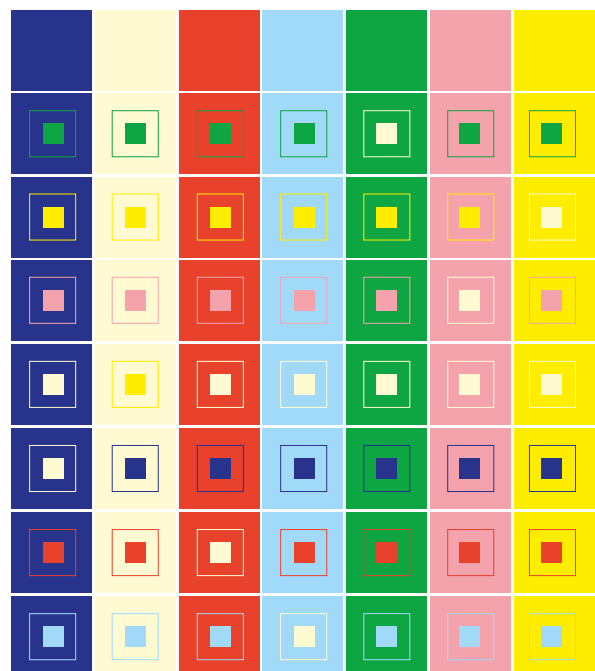


Illustration Style

Since the content of the game is very complex and fully detailed and the colours are bright and intense, the illustration style had to be simple. The small size and the complexity of details is the reason why the style of the illustration is geometrical, reduced and flat. This style balances the whole design.

Finding the right proportions and positions of the puzzle figures was somewhat challenging. Each middle part of the figures had to be exactly 10 mm to allow every half figure to match any other. Each puzzle magnet composition always contains 4 half figures, which are balanced in size, colour and composition. Every figure is placed in between two magnets. That means being forced to fit together with all the figures, both vertically and horizontally.

Materials and Production

Good design considers the following factors in the production:

- Reuse and durability
- Preferring circular to linear production
- Using recycled or recyclable materials (when not possible at least non-toxic)
- Minimize ink usage
- Choose local and sustainable business companies and vendors⁴⁵

45. Aaris, Sherin, *SustainAble: a Handbook of Materials and Applications for Graphic Designers and their Clients* (Rockport Publishers, Beverly, 2008), 19-22.

The best-case scenario is to have an entire sustainable process of production, using clean technologies with renewable resources for making, transporting, selling and recycling. *Memini* makes the recycling process as easy as possible and opts for recyclable and reusable materials: paper, cardboard, metal, ferrite and cotton fabric.

Board

The board opts for 3 mm recycled cardboard. A thin metal sheet is hidden inside it. This was the most sustainable affordable solution to have a rigid surface for the magnets.

Manual

The board opts for 3 mm recycled cardboard. A The Manual is printed on recycled paper in CMYK colour code because it uses fewer chemicals than the Pantone system. Digital printing is also preferable when the number of copies is small. In a future production, offset printing would be more appropriate.

Designing the size of the actions manual according to the paper size avoids a lot of waste in the production.⁴⁶ The most efficient way is to optimise a DIN standard. In order to have a final vertical format, the best solution is dividing a DIN A4 into four parts, each 184x63 mm.

Magnets

Usually magnets are not an eco-friendly option but ferrite is a more sustainable material than neodymium. *Memini* magnets are magnetic on both sides.

46. Boylston, Scott, *Designing Sustainable Packaging* (Laurence King Publishing, London, 2009), 99.

Packaging

The packaging is often a dead-end creation, once it has served its purpose, it is discarded. Considering that packaging should, instead, embrace durability, desirability and profitability to long-term issues about natural resources, *Memini* packaging is a natural cotton drawstrings bag. The fabric is 100% cotton, free from any harmful substance in accordance with ÖkoTex Standard 100. For *Memini*, the colour of the bag increases the feeling of a natural material, so already from the packaging, the consumer perceives the values of the product and what kind of experience it is selling. The *Memini* packaging has two functions:

Firstly, it shines and breaks silently the noise of busy retailer shelves⁴⁷ with a colourful image printed on the fabric. This joyful feeling spurs consumer to pick up the product from the shelf. The bag does not show its product, only its values. More specific information about the game⁴⁸ is written on the tag applied to the laces: why the user should buy the product, age restriction, what it contains and a short summary of how to play. At this point, the user knows the content of the bag without having seen it. Mystery enhances curiosity. The only mechanics revealed are few puzzle pieces to stimulate curiosity about how the complete puzzle could look like. Another advantage of the packaging is that it facilitates the transport. Both parents and children can easily carry it, without any additional bag.

Secondly, after the consumers have unpacked the game, the bag is ready to be reused for any other purpose. Reuse can be the most beneficial way to reinvent a package use. It reduces waste and develops much more efficient material cycles. Taking the package out of the garbage could revolutionise the entire industry of packaging.⁴⁹

47. Aaris, Sherin, *SustainAble: a Handbook of Materials and Applications for Graphic Designers and their Clients* (Rockport Publishers, Beverly, 2008), 22.

48. Ibid, 166.

49. Boylston, Scott, *Designing Sustainable Packaging* (Laurence King Publishing, London, 2009), 13.

The packaging reinvents its use according to the product content and the brand values and it is designed according to its compatibility with the target group's habits and desires. Children would like to have this joyful bag and use it on a daily base.

Tag, Back.





Packaging with Tag, Bag 330x380 mm.

Social Media

Social Media platforms play a fundamental role in communicating the brand. For *Memini*, Instagram and Facebook are used to communicate the brand, raise awareness and share the user's experience. More than any other social media platform, Instagram fits *Memini* the most. The square post format of the feed is identical to the magnet format of the game. By posting new icons or pieces of the puzzle, the feed becomes a second *Memini* board. In order to raise awareness, the action icons are posted as animations and commented with fun facts and memos related to those actions. In addition, the posts with the puzzle pieces create a playful variety of matches. Every new post changes the position of all the others and creates different combinations of the puzzle figures, like in the real game. Stories are an opportunity to raise a sense of community and spread knowledge: sharing and re-posting the user's experience about specific action topics, creating polls, surveys and challenges that the users can interact with. Facebook is used for sharing information and discussions about sustainable topics.



Instagram Feed.

VISION

Memini has a great potential on the market since it is one of the few products in game design that covers the sustainability topic both in a playful and informative way. For further development, my vision is also to implement different versions of the game:

Memini Mini

For families who want to take a short journey.

Memini School

For school classes and teachers.

Memini Travel

For sustainable travel practices.

Memini Party

For parties and children groups.

Memini has now completed its concept phase. However, it will still take several steps for it to be ready for being launched. In the near future, I wish to test the game with the target group in order to adjust the content, modes of interaction and design, as well as to find the right company to start the production. My goal is to first start the production in Italy and expand it to Austria in a next step. The game will be translated and adapted to the country where is promoted. Despite this being only a vision, *Memini* consists of all the components to become reality. My vision is that *Memini* will soon be used as a playful tool in order to build a better tomorrow.



Implemented Logo.

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