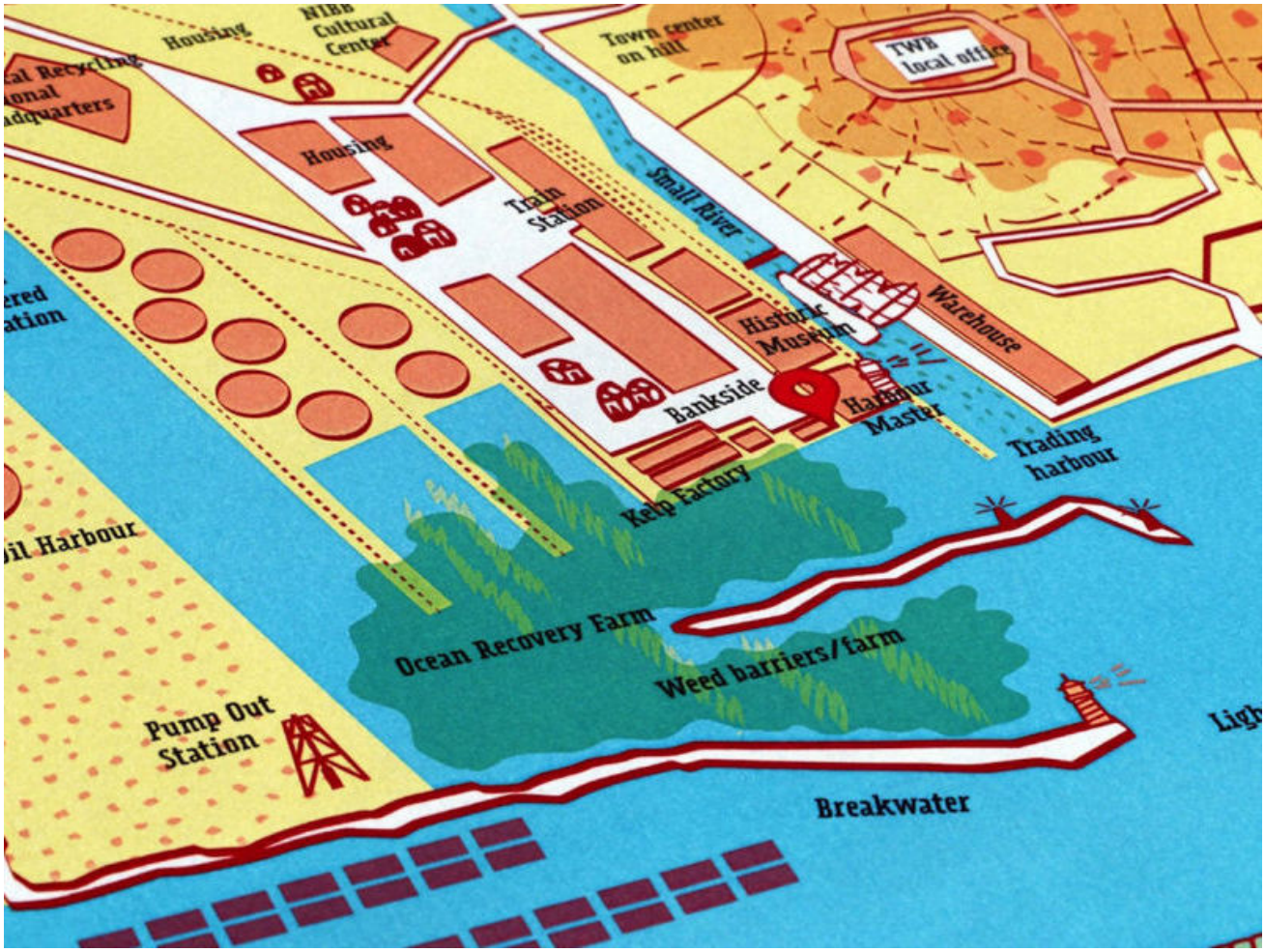

Changing Weathers

Networked responses to geophysical, geopolitical and technological shifts across Europe

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Changing Weathers is initiated by the Arctic Perspective Initiative (API) and coordinated by Zavod Projekt Atol (Slovenia) in partnership with Sonic Acts (The Netherlands), RIXC network for art, science and cultural innovation (Latvia), Finnish Bioart Society (Finland), Curator Hilde Methi within Dark Ecology Project (Norway), Time`s Up Laboratory for the construction of experimental situations (Austria) and Ljudmila Art And Science Laboratory (Slovenia).

COVER PHOTO:
A possible map of Turnton – a small city on the sea in a near future, developed as experiential physical narrative. `2046`, Linz, Austria. Photo: CC BY-SA 4.0 Time`s Up

Co-funded by the Creative Europe Programme of the European Union

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Imagining the Changing Weathers – Physical narratives (Part I)

Time`s Up

The white paper in your hands is our attempt to summarise our activities within the Changing Weathers project in the light of previous developments and where we are aiming to develop in our next stages.

> *When I talk about today, I am planning for the future.*
>
> *When I talk about the future, I am thinking about today.*

We have been drawing together ideas, expertise and experience in the fields of futuring, design, physical narratives, facilitation and a whole range of related topics. These have bundled themselves into a collection of practices that leave us in a very interesting position with regard to the development of new projects. While we are enjoying this position, we hope that others might gain from some of our experiences and have thus collected them into this document.

The first chapter is an explanation of why we think that physical narratives and futuring work well with one another. This chapter emerged from an article we wrote with our friends and colleagues Maja Kuzmanovic and Nik Gaffney from FoAM Brussels and contains significant overlap.

The second chapter is a summary of our data gathering process in the form of four transiencies, i.e. residencies in motion that we undertook in 2015 and 2016. This is perhaps most specific to the themes that we developed for the background for the development of our experiential futures installation *Turnton*.

The third chapter is a short narrative of the development process for *Turnton*, explaining some of the steps we took and showing how the ideas mentioned in the first chapter were applied.

The audience for this document is probably threefold. There will be people interested in the use of physical narratives for futuring, who will be

interested in the first chapter and the third as a case study. A second audience will be people interested in the emerging practice of sail and fair cargo, who will find many ideas from the loose community in the second chapter and ways that some of these ideas landed in an exhibition in the third. The third group of readers might well be those interested in what we did in Turnton and wanting to understand some of the background to the project.

We welcome feedback and questions, as this work is by no means concluded, as is apparent by the piece meal nature of the Trasiency chapter. We are continuing to develop in all the fields that we touch upon in this document and look forward to hearing about other ways of approaching these themes.

Stumbling into a Possible Future

Exploring possible futures is a fundamental skill in periods of disruption and change, which many indicators imply ours is. Whether this is the emergence of Ziauddin Sardar`s *Post Normal Times*, another cycle in one of the many cyclic models of society or the mere perception that we are special, makes hardly any difference. While we have many ways to think about the future, from speculative fiction to family planning, too many of them are filled with implicit expectations and allow the importation of propaganda and other elements that undermine any sense of objectivity, or moreover introduce anything other than what we expect in the first place. While futuring can never be truly objective, attempting to break out of the subjectivity that traps us into thinking about only certain futures is vital, as is attempting to escape from propaganda, wish fulfilment and pre-ordained perspectives.

The academic and professional area of futures studies attempts to work around this by developing formal methods to examine computed prognoses in order to include as many influences, expert points of view, ways of knowing and specialist knowledge bases as possible. Of course there is no accurate prediction possible, but techniques allow the exploration of scenarios, systems of structures that, together, allow the creation of multiple viable plausible futures, spanning a wide collection of intermediate possibilities. A less academic approach to futuring, which we have found to be of value in our developments, involves bringing together a disparate group of participants in order to examine the possibilities that they, together, can create. Building upon techniques such as Art of Hosting and

Unconferencing, we regard those present as the relevant experts and examine possible futures that are of importance to those participants. By gathering many possibilities, participants are made aware of the vast range of possible futures that they can prepare for, aim at, or work to avoid. By working with diverse groups, further restrictions in the development are removed. These techniques are derived from relatively technical and formal expert futuring techniques that allow a relatively non-expert group to explore possible futures in a structured way, this opening the exploration of futures to a wider audience.

One of the more important techniques, developed and disseminated by Peter Schwartz and the group at Global Business Network, takes the ideas of a possible future and creates not only parameters but a complete *scenario*, a view of the world that includes not just some of the effects of possible future developments, their repercussions and interactions at a societal level.

We have been working with futurists, artists, cultural workers, social activists, entrepreneurs and others in order to explore the ways in which these techniques can be used to explore near future possibilities on a human scale. We observe that the mere creation of a scenario is not enough. We think that more insight into possible futures can be obtained by the creation of entire worlds and then detailing slices of them containing the necessary systems, institutions, social groups, fears, hopes and other social changes. Breaking this down to the effects of possible futures on everyday life, we arrive at the fields of *everyday futures* or *small storyworlds*, where we look at characters and their stories within these fictional possible futures.

We choose a particular way to then develop these storyworlds for the public, the so-called *Physical Narrative*. A physical narrative is an explorable installation that builds a fragment or slice of a possible world, inviting the public to enter and explore it. The fragment is immersive and character based, filled with the materiality of the possible futures and the actions, reactions and everyday life of the characters to be found within it. By creating these fragments, inviting the public in and then letting them explore, this technique invites and even demands the inquisitive discussion of the objects, actions and atmosphere of the space. The public is invited to conjecture, to make and then question assumptions, to share their feelings, hopes and reactions to this possible future.

One of the hopes is that such embedded experiences then imbue the public

with a feeling of the possibilities and the fact that there are things in everyday life in which they are involved, that the changes in them are not immense and impersonal and unavoidable, but are part of their lives, their actions and their world, to create as they see fit.

Futures Literacy

There is an anecdote that cuts to the core of our issue. Working with a group of students, futurist Alvin Toffler led a discussion about the developments that the students expected to observe in the next decade or two as they became adults. He was impressed with their understanding of global politics, the rise of terrorism and political actions, potential conflicts about resources and technological developments from materials science through to space exploration. When he then went on to talk about their personal futures, the students talked about the size of their family, the locations of their houses and whether they would have a cat, a dog or both. He was surprised at this disjunction between the awareness of immanent and immense change and its effect on the everyday life of the students. This is one of the issues that we seek to explore, as we compose situations that explore the possibilities for the influence of possible futures on everyday life.

As the world enters something that has come to be known as *Post Normal Times* and many of the existing cultural and intellectual references fail to apply, it might be reasonable to strive for new ways of understanding, discussing and working with possible futures. As our intuitions and conceptions have been formed by what is thus known as normal times, many of these pre-conceptions will no longer hold. As with the children in the Toffler story, it will not suffice to think about the same issues that immediately concerned our parents as to what the future might bring, nor is it enough to fall back on the intuitions developed with our experience before the post normal times. We need to apply techniques that break with these preconceptions and ingrained ways of thinking in order to more widely explore the range of possibilities before us, to perceive, explore, adapt to and even benefit from the turbulence.

Such a period of turbulence will bring both constructive and destructive elements to the surface. In crisis, alongside the problems, we can see opportunities to create new tools, new cultures of thinking and acting, new structures for individuals, groups and communities to orientate and navigate.

We need tools to enhance hindsight, insight and foresight in order to better understand the consequences of our decisions and actions. The future is uncertain, but some rough shapes can be perceived in the present. We can indulge in conjectural imaginations, tell stories about our current situation and imagine how things could be otherwise. We cannot convince one another that we are right because we cannot be right, right now; the future has not yet happened. The future must remain doggedly uncertain. Being prepared for uncertainty may appear paradoxical, yet this mindset could be exactly what is needed in contemporary global turbulences. The tools and knowledge of futures studies and other fields dealing with uncertainty may help people to make sense of the weak signals, trends and tangled forces felt from the personal to global scales. While the process of developing such a futures literacy does not make one immune to the effects of these forces, the process of developing everyday scenarios within possible futures reminds us that there will be an everyday within this and other possible futures, reinstating our capacity to respond and shape our reactions to the possible future, perhaps even to be part of shaping it, to read, decode and respond to the weak signals and emerging trends.

One set of tools that we have become aware of is that of *Futures Literacy*. We need some skills in order to decode these signals, a way of thinking out loud about the future. Futures literacy is the capacity to be able to think, speak, test, learn and share ideas about alternative and preferred futures. Futures literacy is a skill set that enables practitioners to investigate possibilities about the future, to disassemble monolithic future visions and look at variations and adaptations. Futures literacy is a necessary skill in fast moving times when the sureties of the past no longer hold. Futures literacy enables and motivates informed action in the present.

Physical Narratives for Futures

A physical narrative can be described as a theatre without actors, where spectators become engaged visitors, playfully discovering futures by exploring physical spaces, objects and (interactive) media. A physical narrative is an experiential world, rather than a singular story, to be explored and interpreted rather than consumed. Physical narratives take the form of immersive installations where entangled fragments of scenarios can be examined through all the senses as a self-contained, aesthetically coherent reality. Direct experience of scenarios presented as physical prototypes can engage visitors with alternatives to the status quo, and

suggests that futures can be proactively influenced by all. Scenarios that are closely tied to everyday life bring the visitor`s perceptions to a comparison with their own, experienced everyday, further inviting action and the conscious co-creation of a preferred future.

We use a physical narrative of a possible future to make the scenario more relevant that the bare facts of a combination of emerging trends, more life like and life relevant than the shininess of a science fiction movie.

As there are no human guides in a physical narrative, visitors gather meaning and interpret situations in the same way they would in unfamiliar environments. They are invited to observe, investigate and discuss what it might be like to be a part of a possible future, in physical situations that can be freely explored. Reading a scientific foresight report or watching a design fiction video assumes a distance between the scenario and the reader or viewer. In physical narratives, the visitors are surrounded by the scenario, as if they landed in a parallel universe. The important difference being the *lack of distance*, which allows the visitors to inspect the scenarios using all their faculties, including somatic, intuitive and cerebral. Such immersive experiences can be intense and disorienting, especially with near future scenarios, where the slip between fact and fiction can be subtle. The future can feel quite up-close-and-personal, eliciting a strong emotional response or a desire to reflect on the repercussions of the experience for the visitors` own lives. Incorporating social spaces with physical narratives to decompress and share experiences is crucial for their critical assimilation. The visitors can exchange insights and extrapolate to their own aspirations and projections, thereby developing their capacity for (ambient) foresight and contributing to the spread of futures literacy.

We would like to note a particular terminological choice that we have made. While a performance will often have an audience or a spectator, we avoid these terms as they imply not only a certain passivity but also a restriction to an audible or visible perception. This passivity remains when we use the term *observer*, which can be construed to include all forms of observation including olfactory and tangible perceptions, but maintains its anthropological distance. Two terms that are often used to involve a person in the space are visitor and participant. The term *visitor* implies a certain form of hosting on our behalf, that a person is welcomed into a space and given some freedoms, but is expected to behave as a visitor, not creating the world. The expression *participant* indicates a further level of involvement, even co-creating the storyworld. This term is valuable when speaking of such practices as pre-enactments and pre-rehearsals, as

practised by our colleagues at FoAM. For this essay, as we are focussing on physical narratives, we will remain with the term visitor as a way of describing the interaction. One comparison that can be used to describe a physical narrative is to imagine visiting someone in their office, but the host must leave for 10 minutes urgently, "take a seat, make a coffee, feel at home" as their parting comment. In the time available, our eyes scan the bookshelves and the hung paintings and a photo with a national politician, the coffee cups on the desk, the freshly used wine glasses on the coffee table and we begin to combine these traces to form an idea of the personality and the story of the office inhabitant. However, as a visitor in real life, we do not open the top drawer of the desk or unfold the hand written letter on the table. The artificiality of a physical narrative allows and encourages such snooping behaviours. As such we like to talk about the public in a physical narrative as a visitor, a particularly snoopy one.

Some approaches we have taken

We would like to share some of the approaches that we have used for composing physical narratives that we find to be particularly relevant when using them for constructing explorable possible futures. In the next section we will share some observations.

Strangeness and Familiarity

Like a good pop song, we like to understand the structures of what we perceive, but enjoy the small deviations that come along with it. Familiarity comes from many sources, encompassing the totality of our experiences and surprise comes from deviations that do not throw us off too far.

We sometimes think about physical narratives as a film set, where the experience of the visitor can be compared to the use and performance of a camera. Whereas film experts think of the opening or establishing shot as a reference creator, we use the first view in the same way, to give the visitor to the space an overview of what is to be found, to open their perceptions to what might be available, to allow them to explore and encourage them to dive in.

Our attempts to create multiple entry points for a visitor are part of this constructional basis. This uses the familiarity of the visitor, or their affinity

for certain themes, in order to attract them to investigate and explore a certain aspect of the space, a certain part of the room, a particular object or display, screen or surface. Once a visitor has invested some time, they obtain familiarity with the storyworld and can then begin to dive into another part, deeper into the story world. While this subsequent subject of their investigations might not be so familiar or immediately attractive, it is connected to the first and allows a deeper understanding of the world portrayed in this installation. Thus the visitor is drawn into the story, following interests and references, building an understanding of the world in much the same way that we do it in everyday situations: by developing a provisional understanding and building upon it.

In the media saturated early 21st century, we have found that an important question arises as we endeavour to create familiarity. Authenticity feels like it should be important, but for most of us, the media landscape is that which creates familiarity. Most of us have never seen a real murder crime scene nor worked in a fisher`s workshop, but have ideas about what is to be found in both of these things as a result of media exposure. The realities of each of these places is secondary, inasmuch as we are not involving people who have some experience in the field in question. While the authenticity of an environment such as the mathematician`s office in *20 Seconds into the Future* was confirmed by a number of visiting mathematicians, the overload of materials led to an unsatisfying dramatic and narrative experience due to the lack of clarity. The accompanying diagrams on the walls, something that a real mathematician regards as mere decoration, is familiar to visitors from series such as CSI and Numb3rs and feels thus more authentic as a mathematician`s or scientist`s workplace.

Familiarity and surprise, perhaps even cognitive dissonance, is further amplified in a futures based physical narrative, as there is less familiarity to be dealt with. In *Lucid Peninsula*, we approached this problem by using consciously atemporal technologies such as gridded monochromatic screens and oversized test tubes, creating an environment that was clearly not embedded in our current reality, but also not in the past, thus leaving some kind of future, but an unfamiliar one, as the only option. A similar situation has been part of the development of the physical narrative as part of our work within the *Changing Weathers* consortium. Dealing with issues of water pollution and ocean ecosystem collapse as we imagine responses to these and other challenges that have led to a structurally changed Europe, we are building a world that is emerging within the changes we are witnessing at the start of the 21st century. This world is filled with familiarity, being only a generation into the future, but also dissonances with a toxic ocean and high-tech sustainable transport with antique-seeming shipping alongside new cuisines and a vibrant migration-based social system with social wealth redistribution at its core. Please see the extended notes on the Scenario development and the storyworld in the next chapter.

The Everyday

Our media and mind landscapes are filled with possible and plausible visions of futures, spectacular technological advances and social change. These changes are often overwhelming and awe inspiring, sometimes to the point of being awful. In many cases, they lead to the response of deer caught in the headlights, stasis and panic. Or perhaps we "play possum" and pretend to be asleep, uninterested in the changes and letting them sweep over us.

By breaking the changes down and looking at effects on the leading of everyday life, futures-thinking becomes part of our everyday arsenal of ways of thinking. Big budget Hollywood science fiction films have teams that develop aspects of the everyday within their films, with details such as the slippers in the movie *Moon* relegated to the background, but creating a stronger feeling of depth in the world and the characters. Perhaps the most unsettling part of *Minority Report* is not the way that criminals will misuse power and technology to cover their own traces, rather the implications of retinal tracking to provide tracking of purchases and eliminating personal privacy on an everyday level.

By bringing the scenario developed in a futuring workshop down to the level of the everyday, we investigate implications for "the rest of us" and avoid the feeling that the future is something that is done to us by experts and higher powers. We feel strongly that Jose Ramos` comment about abstract futures can be well dealt with by considering everyday futures.

> "... the future shouldn`t be an overly abstract concept lacking relevance, but rather an inspirational call to action with traction."

By translating to the everyday, we deliver our efforts into seeing what can be done to respond to and shape the effects of current and emerging trends. We can remove ourselves from the headlights and regain some perspective on what is possible, plausible and probable, thinking about how it will affect us.

Some things we have done and things we have noticed

With physical narratives we design speculative situations and scenarios (future, present or parallel) as tangible environments. Physical narratives generally incorporate several key aspects in their design: playful exploration, tactile/immersive experience, the mixture of familiarity and strangeness and social interaction. The following paragraphs provide a brief overview of our rationale and several examples from our practice.

Explorable Spaces

In a physical narrative, scenarios become ambient narratives, with no predefined beginnings or endings, and no linear progression from one story fragment to another. As the scenarios are scattered across the space in hints and fragments, it is impossible to experience a physical narrative as a clear-cut, singular future: there are many possible stories hidden within. Characters and storylines are implicitly discovered, rather than explicitly described. Like a good horror film, physical narratives affect the viewer just as much by what is left unseen as by what is presented. The physical narratives invite the visitors to actively discover, interpret and co-create a range of possible scenarios; to weave the story-fragments together from physical artefacts, media snippets and dispersed segments of the characters` stories. They create meaning on-the-fly, akin to free play (Kane), where the making and breaking of rules and hypotheses about the world simultaneously creates the world itself.

In *Stored in a Bank Vault*, visitors take on the role of a detective, stumbling into the underground lair of a group about to rob a nearby bank vault. As they explore the basement, they uncover various aspects of the story - in hacked computers, tapped surveillance cameras, architectural plans, sedatives, by overhearing a character`s phone conversation behind a locked door, or chancing on a plan of attack. Dedicated investigators discover that the heist may not be just about cash, but some enigmatic seeds. They may find a trail of the group`s previous exploits that reveal deeper layers of motivation. Just like in a good thriller, this leads to surprises and unexpected plot-twists, seducing the visitors to delve deeper into the story.

Multisensory Spaces

Physical narratives are interactive environments in which fragments of scenarios are transformed into physical spaces, objects and tangible media. When people explore possible futures by touching, standing on, handling or smelling speculative artefacts, they rely on their mental, emotional, as well as somatic faculties. Engaging all senses allows for multimodal learning and stimulates imagination. The immersive, interactive nature of physical narratives invites visitors to "fill in the blanks" between scenario fragments presented as tactile media. As in the adage "I hear and I forget, I see and I remember, I do and I understand", in physical narratives the visitors can relate to abstract concepts as experiential phenomena, which makes them more approachable and easier to understand. Rather than read and analyse, or watch and absorb, they inhabit the scenario and learn by doing.

In *Lucid Peninsula*, visitors find themselves in a hotel room, in a future where pollution and environmental degradation have lead to peculiar developments in medical and consciousness technologies. An airtight window is fitted with the *OrganoClean* air purification system, the room breathing mechanically, as the air bubbles past plants growing in oversized test tubes. The buzzing of a detox shower can be heard through the locked bathroom door. Clothing items are tagged as having been decontaminated.

The bed is flanked with a *General Infection Negation* blood cleansing device and a *DreamNet* system for "sharing dreams with friends and colleagues." Upon entering the room, visitors are absorbed in the hypnotic breathing rhythms; many lay on the bed with their eyes closed, while others pensively investigate the copper-tubed breathing apparatus and brass window viewer, showing an overlay rendering of the outside world.

The creation of a physical, haptic space enables not only a heightened form on immersion, but also authenticity. Instead of developing complex models of hair movement or a simulation of velvet curtains, instead of the creation of a simulation of the scraping of a chair across the floor, we can simply take the object itself, with all its intrinsic features including weight, smell, light reflections and material stiffnesses. Building a possible future is however difficult, as many of the technologies do not exist or do not work as they should. However as we are not concerned with the actual use of such future technologies, rather in the effects of their use on the culture and everyday life in that future world, we can avoid the object and only include its effects, embedded in artefacts, reports, narratives and processes. For instance we do not need to create ultra light steel in order to discuss the implications of such materials, as the visitor to a physical narrative will see steel and read about the ultra light properties, not hefting it to test its actual mass.

The design and creation of a physical narrative can be a complex and involved task, with all its advantages of becoming explorable and tangible, also carries with it the downsides: there is typically precisely one version of the space, it must be maintained, transported and repaired, the functionality of a machine or system must be made believable, rather than just simulated. A downside that again can be seen to be of value. The visitor to a physical narrative recognises the uniqueness off the piece and the effort that has gone into the hand crafting of the space. In this age of ubiquitous visualisation, the creation of physical objects carries a lot more impact, and with that, the preparedness of the visitor to invest time in exploring the space and its possible meanings.

Social Spaces

Physical narratives provide a shared experience of speculative scenarios. Before and after experiencing a physical narrative, the visitors pass a "threshold" between their present and a possible future. A period of

"compression and decompression" can help relate this experience more closely to people`s lives. Like people who have shared an intense situation or peak experience (e.g. a natural disaster, mountain climbing, punk rock or psychedelics) visitors often have a need to spend time together sharing, comparing and learning from their experiences. They may re-enter the physical narrative after discussing it with others, looking for details which others alerted them to, things they missed the first time around. Social interaction can enrich the story and the experience for all involved. This can be facilitated by surrounding the physical narrative with familiar social situations, such as a lounge, a bar, or a waiting room. It can be as simple as including a pair of period chairs on a carpet in *Unattended Luggage*, where the visitors would sit and closely examine elements of the story together. A more extensive approach was the bar of the *Sensory Circus* or the *SubCity* environment for *BodySPIN*, where visitors reclined and quietly conversed over drinks. They were surrounded by small screens and other "windows" into the physical narrative, keeping them connected to the actions taking place in the installation, only a few meters away.

While these spaces are thematically linked to the physical narrative scenarios, they are obviously in the here-and-now. By "holding space" and informally engaging with the visitors, we do not leave people "hanging" after experiencing (sometimes disturbing) futures. If we are interested in experiential futures affecting thoughts and behaviours in the present, hosting the visitors` conversations and reflection is as important as creating a compelling futures narrative. This allows the experiential insights to echo in the visitor`s work and life, raising ambient awareness of possible future repercussions, moving away from consuming futures as entertaining speculative fiction and towards a more widespread futures literacy.

We have had similar experiences with entrances. A classical entrance to a media enhanced space is often not much more than a doorway or a light trap in order to ensure darkness inside. We have observed that situations in which the visitor is momentarily held up immediately before entering the space, perhaps to engage in a short conversation, or to sign a disclaimer, can help with a mental resetting and a preparation that the following experience will be distinct from current everyday. By making the moment of entry special, we are making the experience special. By crossing a threshold, the visitor is made aware that something is there, a place to be explored with somewhat more depth than the usual experiences. Expectations are enhanced, reduced or shifted, allowing a stronger experience of the details provided. By requiring the visitor to answer some

short questions, they are reminded that this is not normal, a disclaimer heightens the awareness that the following experience is not only not trivial, but possible also dangerous and requires significant attention paid to it. A negative example of such an experience is allowing a visitor to take a written description of the piece as they approach the entrance: as a result, the visitor uses this writing as a bridge into the space and does not engage with a conscious shift. On the other hand, we have had positive experiences with devices applied to the body, especially ones that act to separate social groups, where the visitor is left alone to have an initial experience of the space rather than experience it within a social context that will often buffer their immediate reactions.

As we begin to formulate our contributions to the Maltese European Union Presidency in 2017, we are looking at ways to integrate the social into the appreciation of possible futures and the ways that Malta`s "colours of the Mediterranean" can contribute to this and co-create "a citizen`s Europe" as we move out of this European crisis. We will be working closely with our partners at FoAM, building upon their experience with Food Futures in a number of their projects. For instance, in *Godsheide Futures,* fragments of scenarios concerning the future of a residential neighbourhood were experienced at a reception. While visitors engaged in the usual mingling and networking, the scenarios began to enter their conversations via recipes and menu design. Translating scenarios into "edible futures" created an informal atmosphere that encouraged conversation between the policy makers, urban planners and the inhabitants. One of the key points raised both in the scenarios and while socialising was the need to create more communal and shared public spaces in Godsheide. Over food and drinks, almost imperceptibly, the first commitments were made to bring some of the scenario elements into reality. A year after the reception, the inhabitants have successfully repurposed a local church into a community-supported school and plans are underway to form a co-operative for more ambitious projects.

It is precisely this tactic of developing and presenting speculative culture, embedded in physical narratives and the possible futures of the everyday, that allows and encourages a playful but still inspired interrogation of futures and what they can mean in the creation of today`s everyday.

Uncertainty and Hope

Physical Narratives help us create futures in all the rich detail of corporeal reality, futures that are tangible and approachable. Touching and thus experiencing a fragment of a possible future demands speculation about what it is and what it means, instigating a process of thought and reflection. Visitors are encouraged to think about future possibilities and invited to deepen their involvement. The exploration of futures through physical experience could be seen as an entry into futures literacy, where talking about the future is thinking about today. By thinking about today, we aim to create hope.

> "Hope is not a lottery ticket you can sit on the sofa and clutch, feeling lucky. It is an axe you break down doors with in an emergency.... To hope is to give yourself to the future - and that commitment to the future is what makes the present inhabitable."
>
> Rebecca Solnit

Hope is not meant to deny or remove uncertainly, hope is one of the tools that we can use in order to be prepared for those things that remain, regardless of planning, efforts and luck, uncertain. We cannot deny uncertainty, we must inhabit it. Inhabiting uncertainty can be seen as a counterpoint to strategy, which tends to focus on risk assessment and careful adherence to a plan. However, inhabiting uncertainty does not imply indecision nor does it eliminate the need for planning and analysis. Instead, it offers different types of adaptive, real- time and experiential decision making processes. It invites us to hope, anticipate and openly explore possible futures.

Working with physical narratives as a means to experience future scenarios has taught us the importance of bringing futures to a human scale, connecting them to mundane, personal and social aspects of everyday life. By refraining from spoon-feeding the visitors with a singular future vision, but diffusing fragments of futures in physical spaces, we aim to stimulate a sense of agency – while experiencing the physical narrative, as well as long after the experience ended. Freedom to play with and interpret scenarios in

physical narratives invites the visitors to uncover the multiplicity of possible futures, and their capacity to co-create them. Without succumbing to the illusion of control, the freedom to interpret a future scenario, to imagine the many ways that it could pan out and how one would react to and act within the situation, allows and encourages a process of inhabiting uncertainty and learning to accept this uncertainty as a challenge but not necessarily a threat. Embedding physical narratives in social interaction aims to reflect on the ability to change things in the present, thereby cultivating the futures people prefer. Futures that encourage wonder, hope and engagement. Leading away from monolithic dystopian visions towards something more malleable and elastic.

Continued in Part II: Imagining the Changing Weathers – The experience behind Turnton

Imagining the Changing Weathers – The experience behind Turnton (Part II)

Time`s Up

In the transiencies journeys we aim to collect and amalgamate ideas, experiences and dreams, from those who are involved and/or influenced in alternative practices of transporting goods.

Transiencies – Intro / general

We have chosen "transiencies" as our tool for investigations - a residency in motion. In common with the residency, transiencies should offer a concentrated and immersive engagement with the field and environment in which it takes place, without being stuck in one physical location.

Fair transport is the buzzword, slowly becoming more relevant as climate change gets closer to our everyday life, the destruction of the oceans becomes more obvious and the fa□ade that "business as usual" can continue crumbles.□ Away from the distractions of everyday life, embedded into other everyday lives, the transiency will help us explore the manifold whys and wherefores of cargo, the ocean, biology, ships and the various kinds of weathers that influence these things.

This section aims to bring together the experiences of the transiencies. The text is based upon various blog posts that were made through the transiencies, enriched with further investigations.

Background

The initial stages of our research had led us to be interested in the ocean and the ways that current changes in the way things are working will play out in various ways upon the ocean. The two main threads that we were following were the use of the ocean`s surface as a transport field and the abuse of the volume of the ocean with fisheries and toxic effects. To this end we visited a collection of groups in northwestern Europe, mainly focussed around transport and trade issues and a number of ocean research groups in the Canary Islands.

As we expected, the shortest summary of the situation could be reduced to "it`s complicated" with all the simplification that that phrase entails. The initial interest in ocean plastics lead to the variations in plankton, coastal dead zones, the "rise of the slime" and fisheries collapse, taking in byways through climate change, sea level rise, acidification and a few more disaster scenarios. Meanwhile the investigations into sail transport led to discussions about small and regional production, farming, corporate takeovers, volunteering, social security, regulatory systems and sustainable fisheries.

Planning

We spent the initial three weeks visiting specialists and practitioners involved in a myriad of activities. We had been in contact with many of them, others arose in conversation and exploration. Working with people, visits and discussions, serendipity and plain good luck helped us find interesting and compelling story elements. This group expanded as we went and was then extended by the second round of transiencies in July. In order to reduce name fatigue, we introduce the main names here so that there is less distraction in the text.

Ben, Klaus, Charlotte, Cornelius and the rest of the *Timbercoast* group, at that time in Elsfleth, Germany, now at sea. The *Timbercoast* project has started as a reaction to the destruction of reef systems by the effects of

climate change. Cornelius Bockermann has initiated the project, having invested something like 700,000 Euro and two years into it. The vessel was still being refurbished when we visited it. It undertook sea trials in July 2016 and made its first public appearance at Hanse Sail in Rostock in August, 2016.

Arjen van der Veen from *Tres Hombres* and Lucy Gilliam from *New Dawn Traders* in Workum, Netherlands. Arjen, along with Jorne Langelaan and Andreas Lackner, all working on the tall ship *Europe* at the time, started the *Fair Transport* group as a way to attempt a detoxification of the transport industry. Lucy has been a soil scientist before leaving academia, had been involved with a discontinued sail transport project with a smaller group and has since also been part of *New Dawn Traders* as well as the *eXXpeditions* dealing with ocean poisoning and women in science.

Javier Arístegui at IOCAG in Las Palmas, Canary Islands. The Oceanography and Global Change Institute (IOCAG) is part of the University of Las Palmas de Gran Canaria . IOCAG has been created to structure and coordinate a number of consolidated and interdisciplinary research groups at the University of Las Palmas de Gran Canaria, and it is intended to assess the ocean`s role in the Climate Change, while investigating how this change affects the planet in the singular marine and coastal ecosystems.

Madadh Maclaine at *Fair Winds Trading* in Oban, Scotland. She is also tied in with the *International Wind ships Association* and their project looking at small harbours around the North Sea region.

Freya and Marcus Pomeroy-Rowden, co-skippers of *Grayhound* lugger, Cornwall. The *Grayhound* is a replica of a 1784 privateer, built new, transporting organic produce between Brittany and southern UK.

Alex Geldenhuys and Fluffy from *New Dawn Traders*, Bristol. The *New Dawn Traders* are a group that works closely with the *Fair Transport* group to bring rums over from the Caribbean, which they then market themselves, as well as sourcing cocoa beans and coffee beans.

Kate Rich, artist dealing with trade, value and other issues under the name *Feral Transport*. Kate`s interests revolve around trade and commerce from a cultural perspective, where she was part of a group that reverse engineered and then published an open source version of Coca Cola, called *Cube Cola*. Kate has worked closely with *New Dawn Traders*, for instance presenting presenting Cube Libre at the *V&A* in London.

Gavin Allwright at the *International Windship Association*, Kent. The *IWSA* is

a industry lobby group for the sail transport and wind transport areas. The *IWSA* aims to bring sail and wind based transport out of the romance of tall ships to the modern practicalities of high tech solutions.

Guilliame De Grande and Diana Mesa have run *Trans Oceanic Wind Transport* (*TOWT*) for several years, building a base of regional transporters of goods between Portugal, northern Spain, France and the southern UK.

FoAM Kernow is a studio in the FoAM network, run by Dave and Amber Griffiths, based in Falmouth, Cornwall.

Anton Mann runs *Xisto Wines*, bringing wines directly from the Porto region of Portugal into Bristol as fairly, cleanly and effectively as possible.

Robbert van Hasselt ran the *North Sea Region (NSR) SAIL* project together with *Fair Transport* and other partners, developing the *Ecoliner* together with Dijkstra naval architects.

Tim Dennis and the crew at the *Quetzal Shipping Company*, an arts and cultural community based in southern Scotland.

This is merely a list of some of the people and groups with which we had a significant conversation. There were many more, some of which have infiltrated themselves into this text, the scenario and world building for the

exhibition or the exhibition itself. But they help give us a few standing points with which to navigate the following ride through the rugged terrain of several weeks of intense conversations.

Romance and tradition

The sail cargo movement is, in general, filled with images of traditional vessels, complete with archaic looking rigs, wooden hulls and some degree of disdain for motorisation, alongside renderings of modern, high tech naval architects plans that would be built if only someone could get the funding together. It is clear from the branding of most of the products transported by ship that this traditional image is part of the entire marketing ploy. Classic ships and piracy resonate well with rum drinkers, coffee, whisky and chocolate are also open to some maritime marketing.

Many of the sail cargo vessels use traditional rigs for a simple reason; traditional rigs were developed over centuries for power and reliability. Contemporary sailing rigs, as seen on pleasure and racing vessels, are designed primarily for speed, ease of use and the ability to sail close to the wind. This is not the qualities that a sail cargo vessel needs. Powerful gaff or lug rigs are used in coastal transport, where contrary winds are likely. For trans-oceanic sailing, ships use the regular trade winds, following courses that keep the winds mostly astern. Square-rigged vessels remain useful for precisely this type of sailing. Thus the interest in the Dynarig, developed by Wilhelm Prölls in the 1960s. This modernisation of the square rig, with curved spars and remote controlled furling, melds classic practicality with contemporary efficiencies. The rig has been implemented on the millionaire`s yacht *Maltese Falcon* to acclaim. The *Ecoliner* has been developed by Dijkstra naval architects, the *B9* by B9 Energy in order to use this rig for larger transport capacities in the thousands of tonnes. Currently, the most high profile ship in the fair transport circuit is the *Tres Hombres*, a 32-meter ex minesweeper, rebuilt to a brigantine between 2007 and 2009, sporting a brigantine rig with four square sails on the forward mast. *Tres Hombres* and her sistership the *Nordlys* are both engineless, in order to emphasize the cleanliness of their transport, as well as making more space for cargo. As a result, they cannot be registered in a European country, even though they operate out of Den Helder. Initially running under a Sierre Leone flag, they now operate under a Vanuatu flag. The use of these "flags of convenience" is widespread in the shipping industry. Usually they are used to optimise (i.e. avoid) taxation, have lower safety standards avoid liability payouts and for other convenient profit maximisation strategies. For *Tres Hombres* and *Nordlys*, the Vanuatu flag allows them to operate without a motor, underlining their intentions, rather than indulging in some financial foul play.

Chatting with Marcus and Freya from the *Grayhound* has been inspiring and surprising. Their boat, or probably one should say ship, looks like it fell through a hole in time straight from the 18th century. It is, however, a new build and meets the most stringent requirements for UK registered global passenger travel.

While some vessels might take advantage of the lack of strictness that might be given them by resorting to "maritime heritage," the *Grayhound* is built with only the most elementary of technology above deck, but is high tech below. Watertight bulkheads, stability calculations, 12 tonnes of lead ballast, all necessary requirements for Category Zero. This is the standard

to which a UK flagged vessel below 22m waterline length needs to be kept to be allowed to take paying passengers on travel to any oceans. To my surprise, this was not the most expensive thing to do either. While they do not calculate their own cost of time, they have a build cost of 300,000 GBP over one year. They were able to fund this by selling their own small boats, a house and taking on 18 months of paid cruises. With this gargantuan effort, they paid for the entire vessel and were debt free. Not to say they were cost free. Ships, especially traditionally rigged ones, must be permanently maintained, with daily salt water deck washing to keep the wood moist and rot away. The *Bessie Ellen* calculates around a thousand pounds per day that is necessary to keep her operating year round. As Marcus says, if the vessel isn`t earning money, it`s costing money. And they cannot afford that.

Strangely enough for me, the bilges were to be dusted, not pumped. Expectations are that wooden boats are, if not wet, at least damp. That need not be the case and can be traced back to the building of the ship. The most mind numbing job on a wooden boat build is probably caulking, but that is what keeps her dry. So it is not the job for a rank amateur, unpopular as it is. The repetitive and mind numbing job of hammering loose cotton rope into the gaps between planks and covering them with tar to keep water out is one of the most important jobs of all.

A strange inversion of approaches. An old boat style built new to the highest standards, no flag of convenience, the most irritating job carried out by the skipper: and for it they have a low cost vessel that is paid for already and is carrying on supplying home and livelihood for the whole family, with paying passengers and 6-weekly cargo voyages to Brittany. That sounds future proof.

Perhaps this is a perfect example of how we can move forward, with simple living, with economics that are sustainable, with old technologies married to new, with safety a priority but without making everything banal. Neither flags of convenience nor hard hats on deck are necessary and sometimes the most important job is the most annoying, or vice versa.

Clean shipping is not just sail cargo. There are many other projects such as the speculative use of waves as propulsion or the obvious introduction of natural gas as a fuel, which is e.g. becoming mandatory in Chinese waterways. A middle road emerging technology are electric motors combined with effective battery systems, alone or as auxiliary power for wind powered vessels, piggy backing on the developments of better and

better motors and batteries for electric cars and other applications. This combination of technologies and approaches, from traditions to high tech, can also be found in the third stage developments being planned by the *Fair Winds Trading Company* with their imports from the Casamance in Senegal. Because the Casamance is a shallow, ever changing river delta system with villages often accessible only by scrappy dirt roads or water, the export project will stick with the water approach. Thus the cargo vessel needs to be able to navigate shallow waters and be manoeuvrable without another ship. Their plan is to take the Pacific island tradition of a Proa, the use of twin assymetric hulls with the driving sail on the main hull, the mast doubling as a loading crane. The test construction of a 12-meter version in 2015 showed that the design works, the full version should be around 60 meters. This construction is using fibre-reinforced plastics, high technology materials for sails and a regenerative power system to use the motion of the hulls to maximise power available for the electric drive systems.

Trade and ways

In Bristol, I enjoyed a frenzied series of conversations with Kate Rich and Anton Mann. Both are strongly interested in the way that businesses and trade are built and expand, social connections emerge, individuals and groups create niches, build relationships and carry on doing interesting things.

There was much discussion of the middleman, the person between, the maker of connections. Anton related the anecdote of a *Sail Cargo Alliance* meeting where one of those present called loudly to "eradicate the middle man" as a way to deal with some of the inequities of trade. "But that`s me!" replied Anton. He is taking on that role as the purchaser, the freight

arranger, the distributor. As are, it must be seen, the freight carriers. The middleman, whilst possibly being the person who profits from trade in a strange way, being neither the producer nor the consumer, is nevertheless necessary. We conjectured that the middleman might be a necessary evil. Portugese wine will not be delivered by the producer to Bristol wine bars. If we remove the middleman, then we will only trade food with the crusty farmers at a local market and never see a book from further away than we can walk.

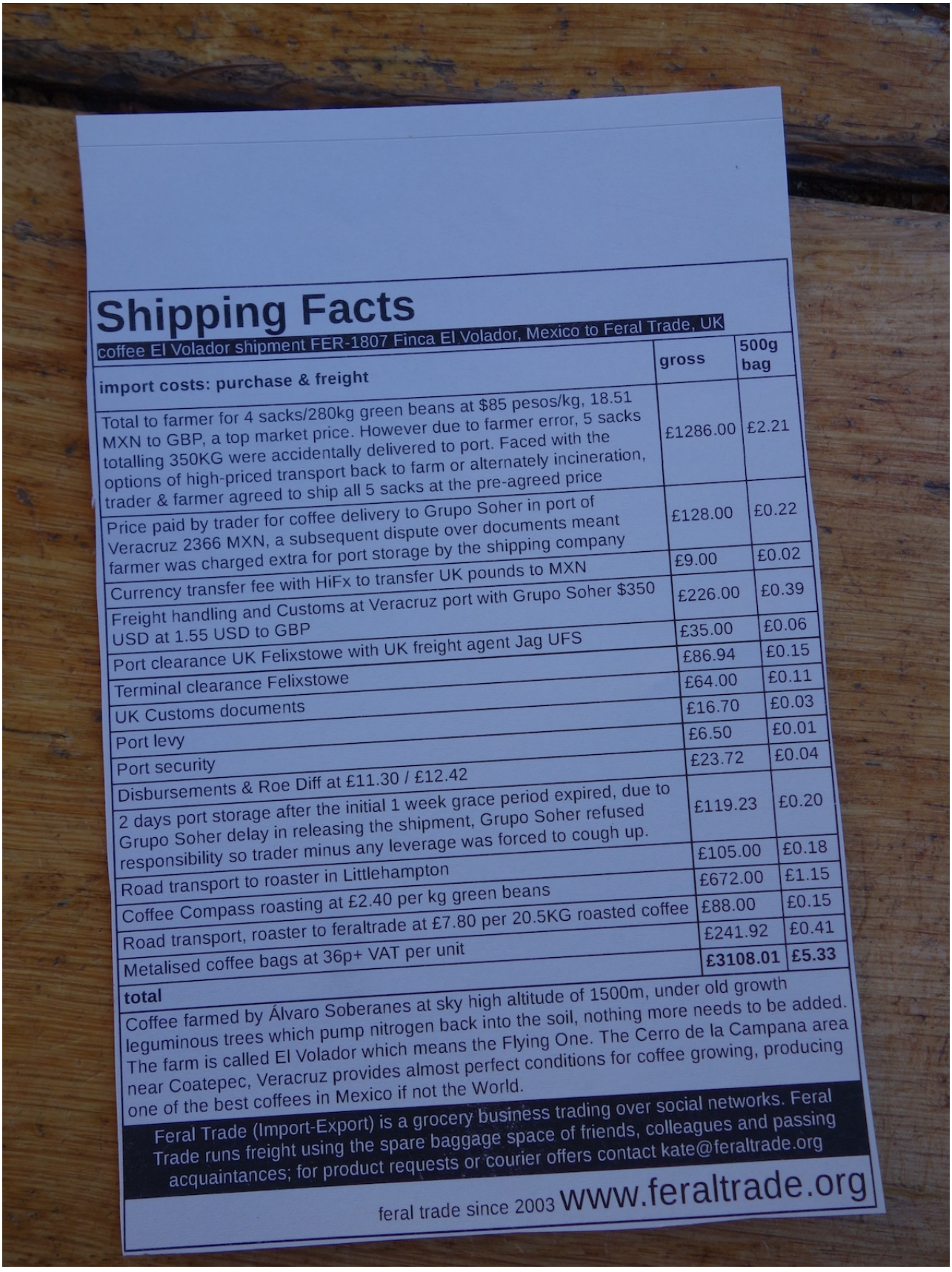
One possible counterexample to this claim are the Onion Johnnies. Before lorries became ubiquitous, French farmers, after the season, would load fishing boats with Roscoff onions and bicycles, then head off to visit the harbour towns of England, selling strings of onions directly to consumers. The trade has existed for well over a century, but became almost nonexistent in the 1970s until recently. There has been a small revival of the Onions Johnnies recently, with groups using the way of life as a working holiday of sorts.

The discussion then turned to the type of middleman that is most common today: the supermarket, whose short supply chains made the long lived Roscoff onions from Brittany irrelevant. Many primary producers, whether it be carrots or wines, are approached by the supermarket purchasers in order to find new and interesting products for the supermarket shelves. Anton related this process, based upon his experiences, as follows. A producer develops a good product, selling enough to get by to some local markets. A supermarket or other large distributor finds out about it and develops a plan for much larger production, offering lower prices per unit but a much larger volume of sales, so that the deal is great for the producer. The producer needs to ramp up production, expanding their infrastructure in order to "make it big." A few debts later, the supermarket starts pushing the price down further as well as introducing extra costs from the fine print, which the producer needs to accept in order to keep repaying their debt, and the spiral continues. Quality is probably not the result of this pressure.

The explanation reminds us strongly of an article written by Steve Albini, producer, engineer and musician, written at the height of the early 90s

independent rock music boom. The article, originally under the line "Some of your friends are already this fucked" but renamed "The Problem with Music," was a detailed description of the way that a "record deal" or "signing with a major" actually played out for most musicians. Moving from a small label, decent sales and a continuing live music career, the process was pretty much the same: expansion, debt and desperation. The functioning ecosystem of the small musicians was being plundered by the big players, burning people out, breaking trust, incentivising and capitalising until the system was broken. This used to be called "selling out" and was regarded as problematic. These days it has been re-titled as having an "exit strategy" and is expected of all start-ups. This seems to ignore the idea that, perhaps, just perhaps, the reason you are doing something is because you like it, because you think it is valuable. It is something of value to people and society and really, it should be possible to keep on doing it.

The conclusion that Kate and Anton espoused was not the elimination of the middleman, but "befriending the middleman" – make them one of us. If you know the string of connections, if you know that they are all okay, then it is okay that they are all making a cut, living from the process. *Feral Transport* lists every stage of the delivery chain, as well as the costs involved in the production of each bag of coffee, on the bag. You do not need to dominate the people in the chain, to exert price pressure on them, rather to exist with them. Instead of expanding, the process of emulation as reproduction was again raised: ways of living and working can be copied, adapted and expanded, generating an ecosystem of multiple small enterprises, people doing things and living from it, developing a community of practice and working out more ways to do it better. As Kate comes from an arts context, she related it to arts practice. Rather than developing large works under one name, she was more in favour of the ecology of practitioners, each developing their own pieces, but engaged in a continual process of discussion and reflection, taking ideas, techniques, approaches and methods from one another and extending them to develop new pieces. This community is perhaps as large as the studio of a single name artist, producing as much work, but with so much more diversity and development than a monolithic studio will have. Studies have shown that cultural homogeneity produces bad decisions (Phillips). We need diversity, not quantifiably optimal monolithic production.



Shipping Facts

coffee El Volador shipment FER-1807 Finca El Volador, Mexico to Feral Trade, UK

import costs: purchase & freight	gross	500g bag
Total to farmer for 4 sacks/280kg green beans at $85 pesos/kg, 18.51 MXN to GBP, a top market price. However due to farmer error, 5 sacks totalling 350KG were accidentally delivered to port. Faced with the options of high-priced transport back to farm or alternately incineration, trader & farmer agreed to ship all 5 sacks at the pre-agreed price	£1286.00	£2.21
Price paid by trader for coffee delivery to Grupo Soher in port of Veracruz 2366 MXN, a subsequent dispute over documents meant farmer was charged extra for port storage by the shipping company	£128.00	£0.22
Currency transfer fee with HiFx to transfer UK pounds to MXN	£9.00	£0.02
Freight handling and Customs at Veracruz port with Grupo Soher $350 USD at 1.55 USD to GBP	£226.00	£0.39
Port clearance UK Felixstowe with UK freight agent Jag UFS	£35.00	£0.06
Terminal clearance Felixstowe	£86.94	£0.15
UK Customs documents	£64.00	£0.11
Port levy	£16.70	£0.03
Port security	£6.50	£0.01
Disbursements & Roe Diff at £11.30 / £12.42	£23.72	£0.04
2 days port storage after the initial 1 week grace period expired, due to Grupo Soher delay in releasing the shipment, Grupo Soher refused responsibility so trader minus any leverage was forced to cough up.	£119.23	£0.20
Road transport to roaster in Littlehampton	£105.00	£0.18
Coffee Compass roasting at £2.40 per kg green beans	£672.00	£1.15
Road transport, roaster to feraltrade at £7.80 per 20.5KG roasted coffee	£88.00	£0.15
Metalised coffee bags at 36p+ VAT per unit	£241.92	£0.41
total	**£3108.01**	**£5.33**

Coffee farmed by Álvaro Soberanes at sky high altitude of 1500m, under old growth leguminous trees which pump nitrogen back into the soil, nothing more needs to be added. The farm is called El Volador which means the Flying One. The Cerro de la Campana area near Coatepec, Veracruz provides almost perfect conditions for coffee growing, producing one of the best coffees in Mexico if not the World.

Feral Trade (Import-Export) is a grocery business trading over social networks. Feral Trade runs freight using the spare baggage space of friends, colleagues and passing acquaintances; for product requests or courier offers contact kate@feraltrade.org

feral trade since 2003 www.feraltrade.org

Or at least this is the idea that was supported by Amber Griffiths from *FoAM Kernow* in Falmouth. Amber is a former ecosystems scientist who left academia a few years ago to develop new projects with FoAM and elsewhere. We talked at length about models of ecosystems and the value

of diversity in times of change. Interestingly she also underlined the need for caution in the application of scientific knowledge, for instance in population and ecosystem science, to human society. However she had no doubt about the applicability of diversity and liminal zones as valuable in human social structures.

Ecosystems build complexity, taking advantage of their substrate, modifying it to suit their needs to create a better niche. Perhaps movements like sail transport are doing the same. Cornelius Bockermann, the instigator of *Timbercoast*, is not to be dissuaded from their approach. Asked what he thinks needs to happen in order for sail cargo to expand he says "nothing." We will build it and they will come. He says that the problem with sail cargo is not the lack of demand, but the lack of tonnage. By creating the possibility of transport, cargoes will make their way to the available ships because people want to.

Timbercoast have found the *Avontuur*, a 1920 steel gaff schooner with a cargo capacity of 70 tonnes. Since 2015 a crew of volunteers have been rebuilding her. Volunteer welders, carpenters, plumbers, painters and all sorts gathered in Elsfleth to bring *Avontuur* back to work. She was active in the Caribbean, the northern Atlantic as well as in the Baltic as a cargo ship under Paul Wahlen until 2005. More recently she was turned into a party boat filled with fridges and a kitchen with a bar filled with nautical kitsch in the deckhouse. In August 2016 she set out with the goal of reforming clean cargo in the seas east of Australia, celebrating her centenary around the Great Barrier Reef.

The vessels currently plying the sail cargo routes suffer from a lack of tonnage. *Avontuur* can carry as much cargo as all three of the main ships combined (*Tres Hombres* 35 tonnes, *Nordlys* 30, *Grayhound* 5) and as much as the *Undine* 70, which operated only between Hamburg and the island of Sylt until bankruptcy hit in April 2016. Asked whether it would not be more sensible to integrate the *Avontuur* into the north Atlantic trade, with their larger ship doing the main cycle with a single stop in Europe (Douarnenez in France), West Africa (Cape Verde or Canaries) and the Caribbean and smaller vessels acting as feeders, Cornelius replied that their goal is not to stay in Europe. The *Timbercoast* crew are aiming for Australia. They are here to go.

They are also here to spread. They do not want to build an empire. Rather, in the flavour of the Transition Town movement, they are desiring to grow by empowering people to emulate their process. The crew of *Timbercoast* do

not strike us as the type that wants to develop a fleet of ships that are guided around the world from a head office somewhere. Rather we see them as people who want to be working hard to make something good happen, to meet with and work with like-minded equals, to have a long chat in harbour and to carry on with their work. This expansion was discussed in the kitchen of the volunteer house in Elsfleth as a spawning; rather than growing bigger, the company grows by supporting people going off on their own.

The process of developing many small businesses resonates well with the technique developed by the *Fair Transport* group, with an umbrella company, a shipping company, the rum company and the two companies that each run a ship, plus other companies that are using the *Tres Hombres* name for chocolate, for instance. An ecosystem of businesses, enterprises, small enough to be nimble, big enough to work, not too big to fail. The *Fair Transport* group helps crew members at the *Sailing School EZS*, encouraging the appearance of competent shippers who can expand the network. This counteracts comfortably with the current modality of commerce that we see around us: expansion for its own sake, profit as the only directive, growth at all costs. Perhaps these sail cargo companies are not only good for the oceans, but good for commerce and the way we trade as well. Trade, done properly and not as some kind of colonial extraction, is perhaps the most effective and long lasting social lubricant we have. Not the trade of market share and stock market perceptions, but exchange of value between equals.

The multistage plan of the *Fair Winds Trading Company* fits precisely in this idea of a network of trading partners. Madadh has developed the personal network of connections within the communities in the Casamance and 2016 was the year that several larger companies took notice and several dozen kilogrammes of Touloucouma oil were delivered to their labs in Western Europe. The next stages have several tonnes of oil being delivered, the proceeds of which should be used to provide oil presses in the Casamance region so that the production can be controlled by the communities rather than the remote powers in Dakar.

It is worth noting that not all of the players in this ecosystem are ships. There are lobbyists and organisers such as Kevin Alwright at *IWSA* and Robbert van Hasselt, pushing for changes and drumming up support. Perhaps more immediately important, there are the providers of infrastructure and logistics support such as *TOWT*. After a maritime festival in Brest, France, I had the pleasure of crewing on the *Grayhound* for a day

as we sailed to the small city of Douarnenez. Travelling from Brest to Douarnenez were the two initiators of *TOWT*, Guilliame Le Grand and Diana Mesa. They were using this opportunity to move the centre of their lives from the hubbub of Brest, a town with a venerable maritime tradition and a huge naval harbour, to the smaller town of Douarnenez on the south side of the same bay where Brest lies. They have spent the past few years using a small warehouse in Douarnenez as the nexus for their expanding network of Wind Transport, serving a number of French vessels as well as the *Tres Hombres*, *Grayhound, Lun II* and the *Nordlys*. It has recently become clear that the continued growth of their organisation requires systematic support, which was not forthcoming in the large city of Brest, but was to be found in Doaurnenez. So the entire business, with office, shop and warehouse, but also their home, was moving to the smaller town.

It is interesting that the peripheries are the places that such ideas can get a grip most effectively. With *Fair Transport* based in Den Helder, *Timbercoast* in Elsfleth, *Grayhound* in Plymouth and the other emerging groups equally scattered around the peripheries, it would seem that the smaller centers are offering the necessary infrastructure for these developments. Such niches, Amber would contend, emerge best in these Randzonen, the edge habitats between one environment and another, the liminal zones of cross pollination, far from the normalising effects of the centers. There is talk of ecovillages to supply and offer infrastructure to the emerging sail cargo fleet, with agroforestry, permaculture, clean transport, fair trade and equitable communities forming a network of practice that provides a basis for more. Douarenez, Den Helder, Palnackie and the emerging community around the *Ceiba* ship in Monteverde, Costa Rica.

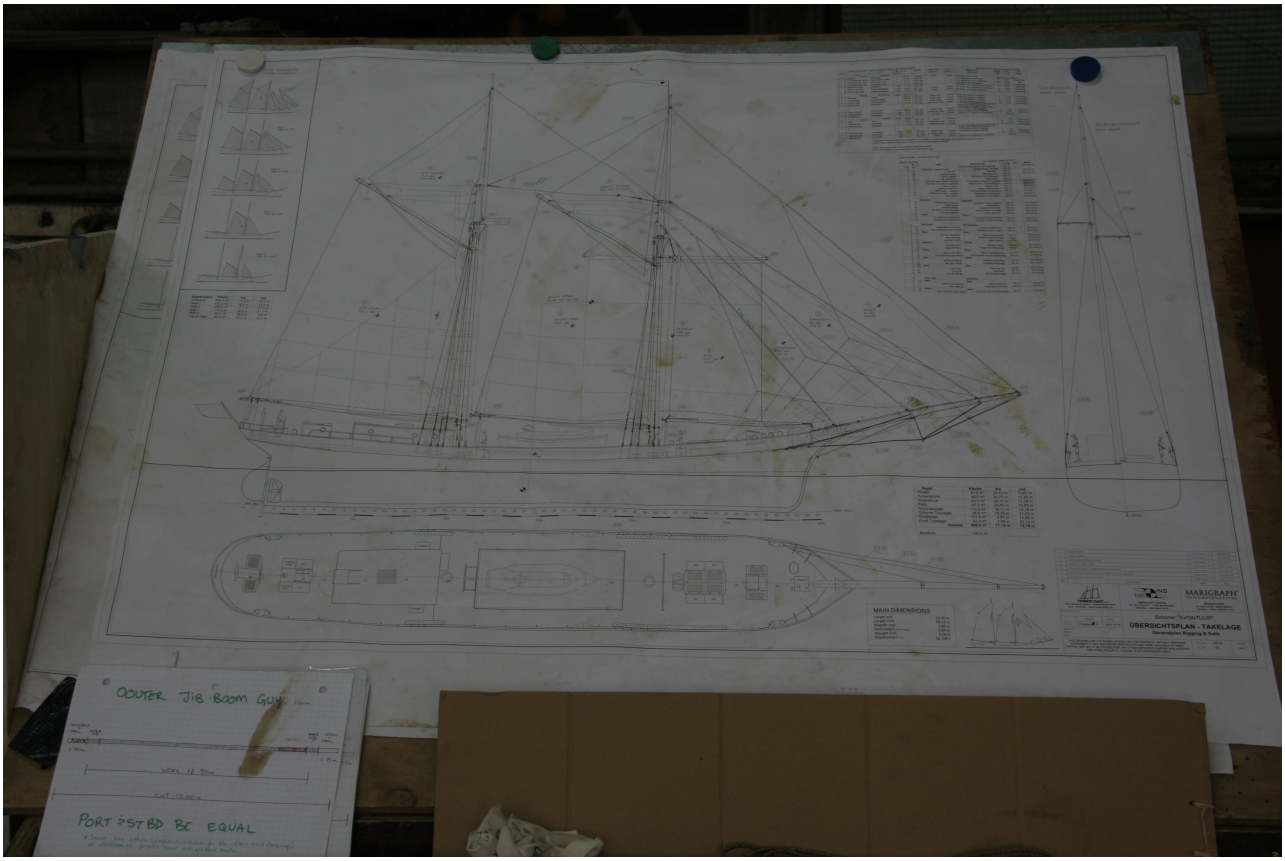
Regulations

Travelling through and talking extensively with the practitioners of Sail Cargo, one recurrent theme is the existence, necessity, impossibility and flexibility of regulations. The word 'regulations` is used here explicitly as it is not just about legalities, there is not just one law, or even set of laws, to abide by. At minimum, there are regulations dealing with ship building and licensing, employment, liabilities, crew competencies, import, stowage, immigration and food laws. These vary from one jurisdiction to another, from one import type to another, from one business model to another. It might be interesting to look at some of them to get an idea what is going on.

It is probably worth saying that no one has even murmured the idea of complete liberalisation. It is clear that regulations are necessary, that all the developments in safety and technology, from the Plimsoll line to EPIRBs, are not to be dismissed and a return to scurvy suffering behaviour condoned. So the consensus is generally agreeing upon the necessity of regulatory frameworks, other than some small detours into discussions about smuggling.

There is also much talk about laws and legality, some of which is not entirely accurate. The various codes for building ships are not so much laws

as guidelines. What are regarded as good building practices, what are bad? How strong must something be, what are the bulkhead requirements? These are thankfully not always written in law, but are rather ensconced in sets of guidelines that are then checked by certification agencies. Because shipbuilding is not a science, but rather a mixture of engineering, systems and survival; discussions arise. Certain guidelines will, in any given build, contradict one another. Cornelius from *Timbercoast* reported that, in order to get Germanisches Lloyd certification, they would need to spend in the order of 140,000 Euros on having plans drawn, with about the same costs again for checking, with no guarantee that the ship would be accepted, even if it apparently met all the requirements. Marcus from *Grayhound* talked about discussions with the certification authority that wanted bilge stringers installed (for structural integrity) that would interfere with the bulkheads so that it would be impossible to make them watertight. After much discussion, the surveyor and Marcus were able to find a solution involving thicker planking that solved the internal contradictions. This was not guaranteed: it could well have been that the contradictory requirements were insisted upon and the ship would have ended up compromised as a result: abiding by certain regulations and thus unsafe.



Similar comments have been made about life jackets and other "obvious" safety gear. If you do go overboard, it might save your life. If it makes you

act unsafely, then it is endangering you. Many people with whom I have had the pleasure of speaking have reiterated the concept that it is much better to have good seamanship rather than good regulations. As was recently seen in Hamburg, where the container ship CSCL *Indian Ocean* ran aground because of a failure in the steering system, a motor is no guarantee of manoeuvrability. A sailing vessel has redundancy: a motor or two, two or more sails, anchors and a competent crew able to use them all. Unfortunately, too many of the regulations are based upon non sail vessels. Thus the guidelines become ridiculous. It is not feasible to have the exhausts of the ship`s motor 4.5 meters above deck, as required by Germanischer Lloyd, with a boom sweeping each way. While that would be important for a vessel running under motor for weeks at a time in order to protect the crew, for the few hours the motor runs on a sail cargo vessel, the requirement creates more problems than it solves, and thus more danger.

There has also been the observation that many of the commercial ship regulations are based upon a size of ship that is far larger than any reasonable small cargo sailing vessel. In the same way that many organic farms cannot afford the certification that they are organic, but happily sell their produce at farmer`s markets, there is an expressed need for smaller trader / cargo certification that is less costly. The UK Maritime and Coastguard Agency (MCA) requires their graduates to have hours on board vessels in order to gain experience and hands on expertise. For some reason, the regulators decided that the minimum size for a training vessel is 300 tonnes. Vessels such as *Grayhound* has 60 tonnes, *Tres Hombres* has 128, so the graduates are finding that they have to gain experience doing menial work chipping rust on a large cargo vessel rather than actually running a smaller ship such as one of these. Thus the smaller ships are starved of competent internees and the graduates are starved of valuable experience, a lose-lose situation caused by some unfortunate tonnage line in the sand.

Fortunately, these are not problems that are in danger of killing off the industry. However they are creating all sorts of issues. There are massive fixed costs in order to be active, so there in a strong necessity to be large enough that these costs can be met. There are few regulations that seem to be let out for smaller vessels, it almost seems as if there is only one solution. This led to Kate Rich suggesting that it would be of immense value to have a ship based peddler`s certification in order to support the trades. In fact it might be argued that, as long as the ship is not the place of

trading, but only the means of moving, while trade is undertaken on foot, then perhaps this is already covered by current UK legislation, perhaps similar to the Onion Johnny practices. There is value in allowing many small flowers to flourish.

For those not interested in direct sales, but rather in trans-oceanic transportation, the growth of the sail cargo network is making may things easier. Whereas *Tres Hombres* has to deal with duties on every importation, trade within the EU is being looked after by *TOWT* in Brest. They have warehousing facility in Douarnenez and, more importantly, they have set up arrangements with various duties organisation so that cargo vessels can deliver directly to their clients without having to go through bonded warehouses and similar complications. There have been few problems with such things, but difficulties such as a narrow "escape" by one boat when they anchored temporarily off the Irish coast and a more serious situation when another vessel had some apparent importation issues and the ship was nearly impounded. However it seems that such bureaucratic details need to be dealt with and by having a central office dealing with the details on a consistent basis, there is the simplicity of repetition and the trust built up that allows things to happen faster, simpler and with less complication. There is a somewhat interesting temporal issue that the ongoing discussion about a British exit from the EU has been met with a pretty solid statement that Brexit will kill off sail cargo, or at least make the process overly complex, with an important and strong border right off the European mainland coast. As Brexit has come to pass, or at least the vote has happened, there is quite some speculation about what can and should happen.

Talking with these practitioners, it rapidly becomes clear that the paradise of the Schengen countries is very local. This degree of legal correctness that is necessary for cargo professionals dealing in sea trade seems to be the reality. After Cornwall`s history of smuggling, we had a long discussion about VAT cheats and other trickeries. It seems that this sort of behaviour is almost impossible these days. In fact, it is perhaps the opposite. Skippers are so wary of any possibility that there might be something illegal happening, leading to a possible impounding of their ship and thus not only their, but the whole crew`s home and livelihood, that they are extremely correct. There is a strong desire for sail cargo to be part of the system, not to be underground or part of a drop-out culture. However there is an equally strong desire, at least in those practitioners who I have met, not to give in to big business, to avoid the Tesco-isation of sail cargo.

This quandary, this tension between two strong, valid and internally consistent desires, is one of the core themes re-encountered throughout the journeys. The Sail Cargo Alliance as well as the other organisations and partnering arrangements between activists and groups seems to help find and share solutions, building structures to avoid work duplication, to avoid unnecessary effort and frustration. They want to work within the regulations, but to do something that is commonly regarded as backward and no longer safe. As if poisoning the air and the ocean would be safe.

How to start a Shipping Company

Discussing the pros and cons of clean shipping, a question arose early about starting a shipping company on the Danube, which we thought was a preposterous idea and promptly forgot about it. But one thing led to another, discussions were had and we found that, at least in principle, a sustainable shipping company on the Danube is not to be regarded as impossible. How does one make it happen?

- Option 1: Do it anyway. Find a boat, register it as a sport boat and start carrying things. If it works for smugglers, why not?
- Option 2: Do it "properly" with all the documentation. This is strangely interesting.

The first thing that is needed is a Konzession, i.e. the permission to operate a transport company. Under 200 tonnes freight, it is not necessary to provide evidence of expertise (fachliche Eignung) or financial backing (finanzielle Leistungsfähigkeit). This means that you only need to show citizenship, of any EU or EWR country or Switzerland, as well as your dependability (Verlässlichkeit) with a current police report (Strafregisterauszug). In order to reduce costs, the forms to show that you are starting a new company (Neugründung) are of value, if you have never been self-employed. You will get a Konzession für Güterbeförderung mit Fahrzeugen mit einer Tragfähigkeit von nicht mehr als 200 metrischen Tonnen bei höchstzulässigem Tiefgang auf österreichischen Wasserstrassen, ausgenommen in die Landesvollzeihung fallende, einschliesslich des grenzüberschreitenden Verkehrs. That means, in wonderfully bureaucratic German, permission for freight transport with

vessels with not more than 200 tonnes loading at the maximal draft on Austrian waterways except those controlled by the states, including international transport.

Once the Konzession has been given, you can register your vessel. For small vessels, it seems that the restrictions are the same as for sport vessels. Once the vessel has been registered, you need to inform the BMVIT which vessel is being used. If you have a motor over 50HP, this vessel also needs to be registered in the österreichischen Schiffsregister.

So far we have obtained the Konzession. It was remarkably painless, the administrators responsible for it are remarkably helpful. The sum of 272 Euros is not cheap, but not awful. The next step is to get two things happening: things to transport and something to transport them in. We managed to get the second of these processes one step further.

A clean shipping company, sustainable in all ways, will have to take various factors in to account: emissions, social issues, energy issues. Based upon Schumacher`s "Small is Beautiful" book and the strangely phrased ideas within there, the smallest (and thus most beautiful) business is a person or two. So our transport vessel must be small, to be handled by one or two people. We have taken an early 1960s sailing vessel, weighing in at 500 kg, and adapted it for freight. The floor and the floor beams have been made more solid, the sail replaced with a powerful gaff rig. But more importantly, we need back up power for negotiating small corners and adverse currents. The *Tres Hombres* and the *Nordlys* fight through with no motor of their own, *Grayhound* and *Avontuur* have motors on board to be used when needed. Each has their advantages. We have chosen, because we are not crossing oceans, to go with a very simple solution: electric propulsion.

As has been claimed by many, sometimes the best way to save money is to spend some, we have taken on a 4kW *Torqeedo* system with four huge batteries. Just shy of 200 kg of high quality deep cycle battery is embedded in the bilges of the boat. Interestingly enough, this is pretty much exactly the same amount of ballast bolted to the keel. The motor brings around 9 HP of power on the propellor, far in excess of what is recommended for this type of boat. But this is a safety issue: on the Danube there is a shoreline within 100m on each side, with barges underway incessantly. There is no room for faffing about with some underpowered solution.

The next stage in this propulsion issue will be finding clean energy sources to re-charge the batteries. But for now we are happy and the engineer who surveyed the vessel has given it a clear thumbs up. This process of getting

certification is also not uncomplicated. There are only three ship engineers in Austria entitled to certify vessels, so one must take the effort to find one and get the necessary approvals. Then the appropriate documents are sent to the state government, a wait of several weeks ensues and finally the papers arrive. Not too late for test sails but too late for any cargo transport. As it turns out, there are several more layers of freighter law that could be applied in order to make the process of sail cargo on the Danube more or less difficult. It remains to see what parts of these laws will be applied.

The last, and probably the most difficult, stage of getting a shipping company running is to have something to ship. This is perhaps the central question of fair transport. What is worth transporting? By emphasising the value, complexity and thus the cost of transport, the whole question of local production arises. While the *Fair Transport* and other sail cargo people are trying to find better ways of doing what we are doing and perhaps working out what we might be able to not do, there is the more extreme streak. A few of them have been known to say, "It`s not fair transport. It`s fuck transport." Transport has brought us colonialism, over fishing, global slavery and ocean pollution. Maybe we don`t need that. Maybe we do not need strawberries in the midst of winter or roses flown in from Ghana on a daily basis. Do we in Europe even need sugar from cane rather than from sugar beets? There are less extreme views here too. One figure that has been tossed around is 80/10/10. Meaning 80 percent of our consumption should be local, 10 percent regional and 10 percent outside that. Translating to transport, where 90 percent of what we consume comes by ship, it would mean that we would only need around one ninth of the currently operating ships. Strangely enough, according to Gavin Allright from *IWSA*, this corresponds to the level of shipping that could easily be converted to wind assisted.

We are looking into our own possibilities and have had conversations with a local publisher to deliver comics, a local brewery to deliver a ginger beer and have a few other avenues open. Another conversation looked into the framework that would make the ship based cellaring of drinks more widespread. Several barrels of good French wine were transported on the *Tres Hombres* in 2015, making a complete loop of the northern Atlantic. The wine makers were amazed at the improvements in the wine over the five-month journey. This is possibly also one of the reasons for the quality of the various *Tres Hombres* rums. *Linie Aquavit* sells itself based upon the process of cask aging on a journey across oceans, often to the south Pacific. When will we be able to obtain an amazing sail-travelled cask

Aquavit, Genever, Obstler or Whiskey being created? As we speak, a barrel of Black Mountain whisky is being seasoned on the deck of the *Grayhound*. Perhaps, even if it does not objectively improve the spirit, it may still give it a better story. And stories are what make a lot of the world go around.

Volunteers, adventurers, exit strategy

The oldest organisation we visited is the *Enkhuizen Zeevaarschool* (EZS) in the Netherlands, one of the few places globally to offer professional sailing competency certification. They offer two main courses, running larger and smaller sailing ships, the *Grote Zeilvaart* and the *Kleine Zeilvaart* (also in English) which run off-season, from October through March. In addition, they offer a Bosun`s Course, a short course (6 weeks) intended to impart the skills needed to run the innards of a sailing vessel, the one who knows everything without being the skipper. Rope, rigging, safety; repeat. It is noteworthy that a considerable number of the *Zeilvaart* courses (running in parallel) were women, women made up precisely 50% of the bosun`s course.

Unsurprisingly, a considerable part of the first day`s effort was an introduction to rope work. Traditional vessels are nothing if not a rat`s nest of lines and more modern vessels are only slightly less ropey. It is interesting that, no matter how long one does this stuff, there are always new things to learn, from a new, simple whipping technique to a sailor`s short splice and the best grommet that has ever left my fingers and fid. One of the interesting things about this process of making things from rope is the creation of value from a combination of time, skills and some simple hardware, in stark contrast to the ever present spectre of expensive, stainless, industrial, irreparable, invisibly deteriorating boat hardware.

After lunch, I had the pleasure of having a longer conversation with Cosmo Wassenaar, the head of the school. Interestingly, the school is run more egalitarian than a pirate ship; everybody gets paid the same. It is not a money-spinner, but it is independent and has run for over three decades. Over that time, it has continued to be a place of learning for intended skippers and mates on commercial sailing vessels. As such, it has a possibly unique perspective on the state of the field.

The presence of sail cargo as a theme in students` thinking has been increasing, from nonexistence about five years ago to being relevant for around a quarter of all students this year. As the Dutch have a vastly larger

classic sailing fleet, it should be no surprise that this school exists in the Netherlands, and as the *Tres Hombres* is situated in the Netherlands, there might be a connection. Talking about certification and regulation, it was claimed that many of the vessels operating in France and the UK are using the "classic ship" exception to be able to do what they do. Cosmo claims that these and other countries could do this, as they deal with perhaps a few dozen commercial classical sailing vessels. The Dutch, in comparison, have hundreds of commercially operated classic sailing vessels and as such there is a strong need for regulatory systems for these vessels. It is perhaps to be expected that, with the current expansion of sail cargo projects, these regulations will start to be used in other countries, which may or may not be a good thing. Regulations are, as we mentioned above, no substitute for good seamanship. But even the best seamanship cannot replace life jackets and fire extinguishers. Sail cargo is in a fragile state. If a single vessel were to flounder in this early stage, the regulatory backlash might be strong enough to sink the whole industry before it even got beyond the startup stage.

The early stage is matched by the spectrum of ways that groups are finding to maintain their operations. Every one has its own mixture of freight, working charters, grants, volunteers, festival charters and direct sales in order to make ends meet. People, as with most businesses, are the most expensive part. With many members of the crew being paying guests, this alleviates much of the pressure on the crew, but most are being paid little more than room and board. For most, the payoff is the adventure, the experience and the learning that goes with the job. *Timbercoast* and *Fair Transport* are volunteer based commercial enterprises, a strange collision of approaches. Volunteers find themselves locked into positions, or desperately holding on to them, as a way to give structure to their lives. There were small murmurings that sometimes it is easier, and even cheaper, to pay for work to be done rather than use a volunteer.

There is a groundswell of development within the community, building from the idealistic and volunteer run building of various vessels and the ongoing desire to build high tech modern sail freighters such as the *B9* or *Ecoliner*. The other side of the coin is the temptation for more vessels to join the movement, without jumping through the appropriate regulatory hoops. Within the sail cargo community, there is a significant fear of the "threat of unlicensed ships" which cut corners, minimise costs and take advantage of the sail cargo buzz. However, if something goes wrong, all will be tarred with the same brush. It is widely regarded that the *Pamir* disaster in 1957,

with 80 lives lost as a result of a unsecured cargo shifting in a storm, is part of the background for the regulatory corset that makes European sail cargo so difficult.

The world of sail cargo is, of course, also a world of adventure and image. Participants, whether volunteer carpenters or sailors, rum drinkers or cartoonists, enjoy the romance and adventure. In an event organised in April 2016, we didn`t get to see those perfect, polished or heroic images. Neither we heard the thrilling, impressive adventure stories. All this, according to Stefano Plank, can be found on-line anyway. Instead we got to listen to anecdotes, these nice, sympathetic stories between the lines of the "big stories". Tales, authentically and unagitatedly covering all sorts of smaller pleasures, complications, successes, challenges, flaws and treats. Reports on everyday life experiences with which one grows, without big fuss. And pictures conveying the joy of doing and crafting, images showing the daily routines of people, making the *Tres Hombres* possible.

Stefano was involved in *Tres Hombres* for several years as a volunteer builder and as a cook and is still in close contact with the operators and supporting their initial ideas as well as further projects such as *Ceiba,* which he was able to announce during his talk. It was a real pleasure following him, his way of introducing his very personal experiences, his impressions and his following considerations. Full of joy and energy one could feel his faith in projects shipping cargo between Europe, the Macaronesian Islands in the Atlantic, the Caribbean and America, driven by wind power only. *Fair Transport*, a term developed during the developments with the *Pierus Magnus* for such undertakings, with its prime intention to sail cargo emission free, was nothing a wide public, ten years ago, would have been aware of (at least not in the industrialized world). Trading goods and freight navigation around the world was and still is clearly associated with, dominated and operated by an enormous machinery based on an economic system only aligned to the maximization of profits and cost-efficiency. Nevertheless there is a growing community establishing and probing alternatives – and fair transport is slowly becoming more relevant as climate change gets closer to our everyday life, the destruction of the oceans becomes more obvious and the fa□ade that "business as usual" can continue, crumbles.

Obviously, neither this single schooner, nor similar projects like *Grayhound*, *Avontuur*, etc., will turn around the cargo shipping system on a grand scale. These projects will not perceptibly lower the horrendous emissions spat out by the approximately 60,000 cargo-ships running on heavy oil, transporting

90% of all goods traded worldwide, enabling the way of luxurious consumption we are used to and playing a major role in destroying our planet.

Nevertheless – as Stefano puts it: "it might work at least some people as food for thought, as well as it gives these people, taking part in the undertaking a chance of great learning- and life experiences. And maybe the thought will grow into becoming a movement, similar to *Greenpeace* and start bigger scale communities".

Continued in Part III: Imagining the Changing Weathers – Climate and system changed world

Imagining the Changing Weathers – Climate and system changed world (Part III)

Time`s Up

Our current future scenario includes ocean system collapse, where we note that the collapse tends to be on the large predator end of things, while, to a larger degree, the smaller and less carnivorous parts of the ecosystem are less impacted. So unduly large amounts of energy and time are currently spent hunting bluefin tuna for high paying sushi aficionados, while carp, jellyfish and seaweeds are left, in general, alone and are even regarded as plagues. This is, of course not quite true.

Slow: Food, fisheries, transport

In his book Unnatural history of the Sea, Callum Roberts talks about the way that overfishing can lead to a population boom of sea urchins, which then decimate seaweeds, leaving less space for young fish to hide while growing, allowing more sea urchins, etcetera. Our actions have repercussions, things are complex in the networks of ecosystems.

This has resonated strongly with an older question, that of vegetarian seafood. As a good friend put it, the surface of the ocean is not a significant moral dividing line, so a rejection of meat should imply a rejection of fish, regardless of what the Catholic church says about flesh and fish on Friday. However sea vegetables are complex, hard to find and strange to cook with. Not as hard as jellyfish though.

Seaweeds play a background, but important, role in contemporary society. As a source for iodine and other chemicals, as animal feed and as a food additive. However it seems that there are reasons to increase seaweed forestation. One of our speculative characters will follow the line laid down by the innovator Bren Smith, who has restarted his ship-board life by becoming a seaweed farmer after the cod fisheries collapsed from overfishing. This has earned him, among other accolades, a Schumacher award. His example *Thimble Island Farm* is the basis for the *Green Wave* development, which aims to encourage many small sea farmers to emerge. In the Netherlands and the UK, many experts (such as Jan Kruisse) collect wild seaweeds, often for high end restaurants, while some small seaweed farms have been set up, feeding into the *Dutch Weedburger*.

We are unsure how seaweed farming may or may not help with the dead zones, the resulting algal blooms caused, in large part, by the surplus agricultural run-off from fertilisers that are used in overabundance. There is hope that the seaweeds will act as a recipient for the nutrients, absorbing them but not dying like algae and cyanobacteria, causing eutrophication and anoxic (i.e. oxygen free) water that suffocates fish, molluscs and anything else living there. Perhaps seaweed farms can act as a barrier, like the fertile hedges bordering fields and maintaining biodiversity or the free fences providing shade and wind breaks on Australian sheep farms. Perhaps they, as Bren claims, help reduce tidal surges from storms, perhaps they act as refuges for juvenile fish and molluscs, incubating the necessary changes for recovery.

It is interesting looking at the way that we, as a global population, are breaking things and how we might slow that process down, perhaps even to a point where collapse in not necessary. Within the scenario we are currently developing, we can take some guesses and look at ways that various strategies might play out. How will they affect everyday life? With fish and shellfish replaced by seaweeds and jellyfish in restaurant menus, with the ocean often poisonous from algal blooms and the beach unenjoyable, how is life in a coastal town? What are the everyday notices and decisions? How nice is it to live beside the seashore, to be beside the

sea?

Lucy Gilliam has set up eXX*peditions* with Emily Penn in order to investigate plastics and other pollutants in ocean waters in female only research/sailing crews. *EXXpeditions* have undertaken to look not only at the presence of pollution in ocean waters, especially in the form of plastics, but also to look at the presence of pollutants in their own bodies. This action brings about a swing of perspective. The dreadful expression attributed to Stalin that the death of one person is a tragedy, the death of millions is a statistic, gets turned on its head. Mercury poisoning is a statistic until you are talking to someone who measurably has mercury poisoning and quite likely picked it up by doing ethnographical fieldwork and drinking water tainted by the run-off from gold mining that is poisoning the water of millions of people.

It has been conversations like this that have underlined the developments of future physical narratives, the breaking down of grand narratives and statistics to stories of fictional characters or even actual people. When we see the repercussions in everyday life, the statistics begin to be real.

Community

Arriving at the tiny station of Dumfries, I was welcomed by a fellow meeting his own description:

> "You will recognise me from the bright Red Hat with feathers..If I am late don`t worry yourself, your arrival is my utmost importance"

Tim Dennis, aka Captain Quetzal, is at the core of a merry, enthusiastic, dedicated band of activists, artists and practitioners, who are setting up a very interesting collection of projects in and around the small Scottish port of Palnackie. The central project is the *Quetzal Trading Company* with a gallery, studio space, carpentry workshop and other activities rounding it out. I had arrived at precisely the right time. The entire group had assembled in the local bar (it is a one bar town) for drinks while a few other finished the preparations. One month previously, the dynamics of the group had become complex, so the workshop was to be closed on the date

I arrived. Originally for one month, the planned closure was altered to one minute due to the departure of some of the complexity causes. The entire crew were dressed for the occasion, wonderful Edwardian regalia and feathers in hats, I was by far the most banally dressed of all present. Shortly afterwards we made our way to the workshop, where a small, short ceremony was undertaken, the workshop closed, re-opened, and we all trooped inside, accompanied by horns blasts and smoking incense.

Tim and the rest of the group have a wonderful ability to make people feel welcome. With the very short time of my visit, it was all they could do to get me around to visit some of the partners in their activities. We started before 8am enjoying a cup of tea with the (apparently typically Scottish taciturn) owner of the local truck and skip company who rented them the workshop space, then inspected the harbour, into Dumfries to meet some local boat liveaboarders, a poet, the local chandlery, an ocean going yachtsman who is training them up and Alice Francis, a local artist who is getting a second boat ready for sail cargo.

The *Quetzal* approach is wildly different from that of the other groups I met. There is nothing international, no fine rums or fairly traded chocolate, no maritime traditions. The goal of *Quetzal*, at this stage, is to move stuff. Whatever is needed, however possible. Members of the group have experience transporting horses, building ships, driving and repairing trucks, building houses and generally being useful in their communities. The have local suppliers of animal feed and hardware that need deliveries to the Isle of Man, just visible on the horizon. Because there is no ferry service from Scotland, this must all go via Liverpool, a long detour. So the *Quetzal* approach is: let`s get it there. Cheaply, with some adventure, in small boats using the wind and tide of the Firth of Solway to our advantage. The return trip from the Isle of Man will be used to bring supplies from the small breweries on the island to some local pubs. The group have already bought one building to use as a gallery and studio spaces, perhaps they will be opening Palnackie`s second bar before too long.

The Quetzal is a central American bird that is beautiful but, if kept in a cage, will die. The *Quetzal Trading Company* is living up to their name.

Unrealised projects

Talking to a number of the *Fair Transport* practitioners, it has become apparent that their time at sea is one kind of paradise, but life requires a multitude of them. Echoing the words of the founder of the *Slow Food* movement, who apparently wanted to be a sailor or a shepherd, a number of the practitioners within the group are looking at finding places to settle down. As *TOWT* solidifies its basis in Douarnenez, *Grayhound's* co-skippers have bought a small farm building and large garden nearby. Other people from *Fair Transport* and *New Dawn Traders* have also been known to dream about the possibilities of settling down, at least for part of the year.

This development offers several paths forward. Freed from the need for the ship to be home, it can take on new captains and new crew and maintain a level of activity that helps make the investment in that ship possible. Having a solid land base means that storage and refurbishment becomes less of an issue. While the practitioners enjoy the feeling of wet feet and wind in their hair, they also want their fingers in the ground.

Cosmo shared his planned, but currently unrealisable sail cargo project for the inner seas of the Netherlands. Fresh organic produce from Friesland would be delivered diagonally across the IJselmeer and Markermeer to Amsterdam. The market that would receive the produce had offered to pay around 500 Euro above standard delivery rates for the marketing privilege, while Cosmo`s estimated costs were about triple that. However the plan has not been laid to rest, a number of factors could still make the project feasible. Lower vessel rental costs are one simple factor, but the reduction or transfer of crew costs is probably the most significant. There are a number of possible sources. The school would be able to offer training on board for the students. Whether this costs is more or is included, is up to the school. For the summer season, the vessel could take advantage of one of the bastions of sail training, the use of shipboard life as a place to develop "character." As successfully used in such examples as the Vienna based *Noah*, groups such as recently released inmates, the unemployed and at-risk youth have benefited from such activities. This would allow the project to spread its costs around, as the *Tres Hombres* does with their cargo / training / show time split of income streams, to perhaps a cargo / training / social split.

Conclusion

The collection of stories and ideas, histories and experiments met with on these transiencies have been fed into the backstory for the *Turnton* piece that we developed and that will be described in the next chapter. However the experience also shed light on an emerging world of practitioners that are merging new and old techniques and technologies with the social lubricants of trade, travel and transport to enable new ways of thinking about how the world can and should work.

The experience

As we took the ideas of the transiencies and developed a scenario and then a storyworld, we had to incorporate a range of other inputs, ideas, influences and matters that help make the world make sense. The following few pages summarise that process and describe the resulting installation.

Futuring Exercise

After the major parts of our transiencies have been accomplished, summarised and brought into a shape we moved forward into a creative process to explore possible futures informed by what had been collected during them. In the following we will bring in some logs written during the Futuring Exercise done between April and June 2016.

But perhaps we should first revisit the idea of a futuring exercise. Futuring Exercises, in our understanding and practice, encompass the development of possible future scenarios leading eventually into experiential futures that can be explored by an audience. They encompass creative processes of exploring futures facilitated as a collective, participatory exercise. We apply simplified techniques, methods and tools, established and tested by professional futurists, leading into scenarios and storyworlds, which sketch and describe parameters as well as details of a possible future. Within the pan-European *Future Fabulators* project our partner FoAM published a second edition of their *Futurist Fieldguide*, which is perfect source for basic techniques. See the early chapter for some more of our thoughts on these matters.

Luxury in a climate and system changed world

Over the last few months there has been a lot of "slow travelling" in our plates, transiencies as we call them, a term deriving from a former pan-European project we have been involved in: *The Resilients*. Residencies in motion, move and stop, stay a little while, gather impressions, information, opinions, anecdotes, voices and leave again, just to repeat the procedure of collecting more references on another place.

"Data" collected during these transiencies includes, among so many other ideas, attitudes and investigations, inquiries on how possible futures are forecast by marine biologists, ocean experts and carbon dioxide specialists as well as a range of experiences and challenges of currently active fair-transport and feral trade initiatives and activists.

In addition to the transiencies, fair transport experts were consulted and invited to our laboratories, non-fiction books and papers were read, documentaries watched, radio-features listened to, statistics, analyses and diagrams decrypted, all along the lines of a current state-of-the-art on trade, water and transport.

Months of gathering and processing loads of often dark and disturbing data, details and prognoses of our prognosticated futures. Though our learning was positively enriched by initiatives fighting against the current states of extractive and exploitive methods dominating the politics and economies around the world. It is good to know that energetic and ambitious alternative thinking and acting exists, as we dig into the details of current trajectories.

Even though our research was still ongoing, we kicked off a first multi-day futuring exercise. Despite or rather because off all the shocking, dark and disturbing data, details and stories we collected, we concentrated on how a definition and interpretation of luxury could look like in possible futures.

After consulting our first and foremost handbook, the *Futurist Fieldguide* - edited and published by our long-standing partner in futuring questions FoAM - we chose a method that we have never tried before for a futuring exercise: CLA - Causal Layered Analysis. Containing some features that allow a rather subjective and narrative approach to possible futures, it focusses on in-depth analysis of current issues before identifying alternative situations, in particular futures.

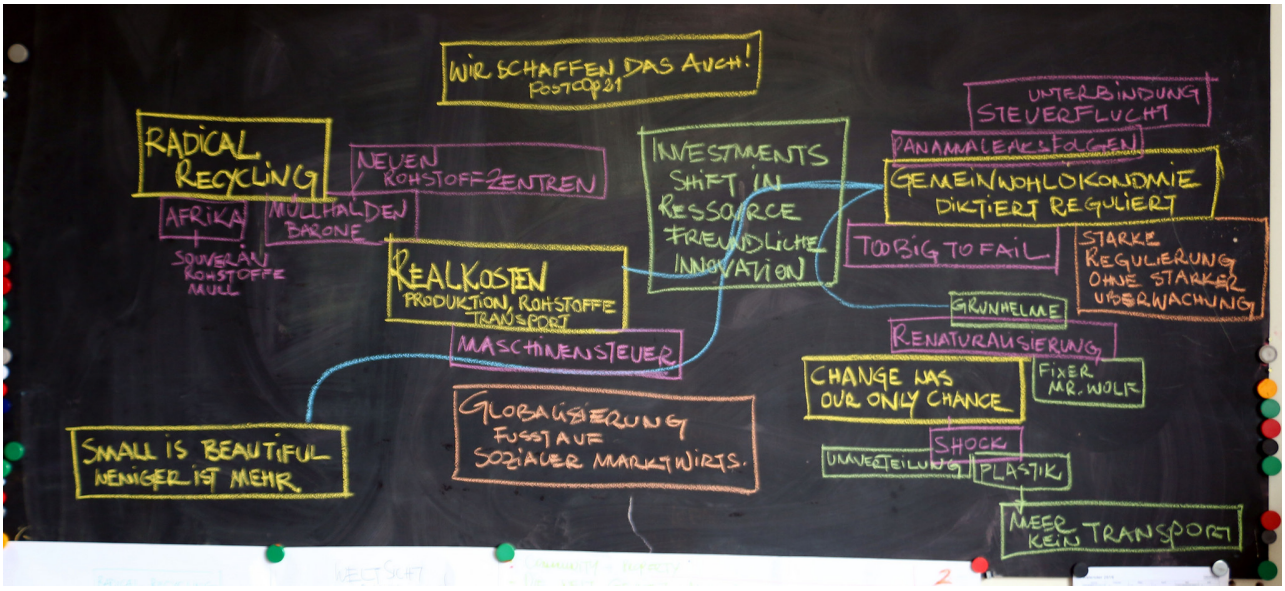
> The analysis happens on four levels: litany, social or systemic causes, discourse / worldview and myth / metaphor. *Litany* identifies current issues, assumptions, facts and data. At the next layer the *social* or systemic causes underlying the `litany` are analysed. At the *discourse* layer, dominant worldviews and mindsets are examined, which give rise to the issues. The deepest layer looks at the foundational *myths*, metaphors and archetypes that influence the unconscious and/or emotional undertone beneath the issues. - FoAM, *Futurist Fieldguide*

After understanding the layered causes of an issue, the method suggests looking at alternatives – either within each layer or beginning with a new myth/metaphor and working up through the layers to create an alternative scenario. From this alternate scenario, new possibilities can be distilled and translated into solutions, policies, and other types of actions that one can begin implementing in the present.

After several sessions concentrating on how luxury is seen, defined, talked about and practiced - including developed worldviews which allow these definitions and finding archetypes, legends and myths the worldviews are grounded in, we started to shift several parameters to see how alternative futures might look like. A first framework, a skeleton of some possible futures has been worked out - for further details there are more sessions to come - preferred futures need time to be imagined.

As we seem to be fed up with negative, dystopian future scenarios, we decided to draw a world that allows positive visions, even though including some non-reversible consequences of our recent and current behaviour. Yes, we allowed ourselves to be naive and dreamy! "Change was our only chance" together with "Yes, we can do this as well" ("Wir schaffen das auch") were created as the rallying cries dominating our images. Both slogans were fictionally derived out of some delayed post COP21 reactions as well as the (hoped for) repercussions of the Panama Papers, becoming eventually relevant after glaringly obvious environmental and social disasters also effecting industrialized regions. We imagined that this would force alterations in the global, economic pace as well as the general public view of social fairness.

In short, we did not want to imagine that humanity would change anything until environmental degradation had hit some stage of development that it was no longer possible to be a denialist, and that we, collectively, had managed to make some desperately needed changes in our socio-economic structures.



This chosen starting position has lead us to a framework of parameters, including amongst others, the implementation of radical recycling, public welfare economics based on real costs and the disempowerment of profit orientated wheeling and dealings. Sustainability on all levels (economically, environmentally and socially) replaces extractive economies and striving after endless growth. Of course we are not saying every single person in the world follows these new rules, since we need to have some frictions in our future-fiction as well. These circumstances triggered fundamental changes in the nature of transport, trade, manufacturing and investments. Perspectives on clean and renewable energies and resources shifted drastically. Labour underwent a re-evaluation, values in general were adapted.

We are facing a future world, which potentially allows a balanced co-existence of all people alive in an environmentally and economically thoughtful setting. Yes it is a fabulation, and yes it is a dream. So what? What can be wrong with a vision trying to bring back some sort of vigour and passion into a everyday which very often only gives us a chance to fear what a near and less near future entails?

Character Development

Here we are, facing a possible future based on a global public welfare economics and sustainability on all levels (economically, environmentally and socially). This vision might even be preferred, if we disregard the fact of the environmental and societal disaster events that have eventually triggered the social changes taken as the skeleton for our setting. Ocean collapse with toxic coastal waters, transport collapse, climate change driven water level rise to mention just a few.

We worked on litanies including possible headlines for newspapers, repeated opinions and slogans, as well as possible myths in such an altered world. Litanies were developed that would reflect some changes and bring in some of the ideas that we would like to have reproduced in the world. Some examples that we developed:

- Allow yourself the luxury to survive
- Stay with a clear "no" to destruction.
- We got back our planet A.
- Development needs debt relief.
- Interest is theft.

Such litanies include not only some slogans from activist groups but also twistings of existing slogans. Such litanies bring a tail of connected meaning with them, helping us to create detailed imaginations of what could be happening in this world. We then shaped necessary institutions, interest groups and organizations that might be of relevance. Some examples of institutions and organisations we see for a possible future in a climate and system changed world:

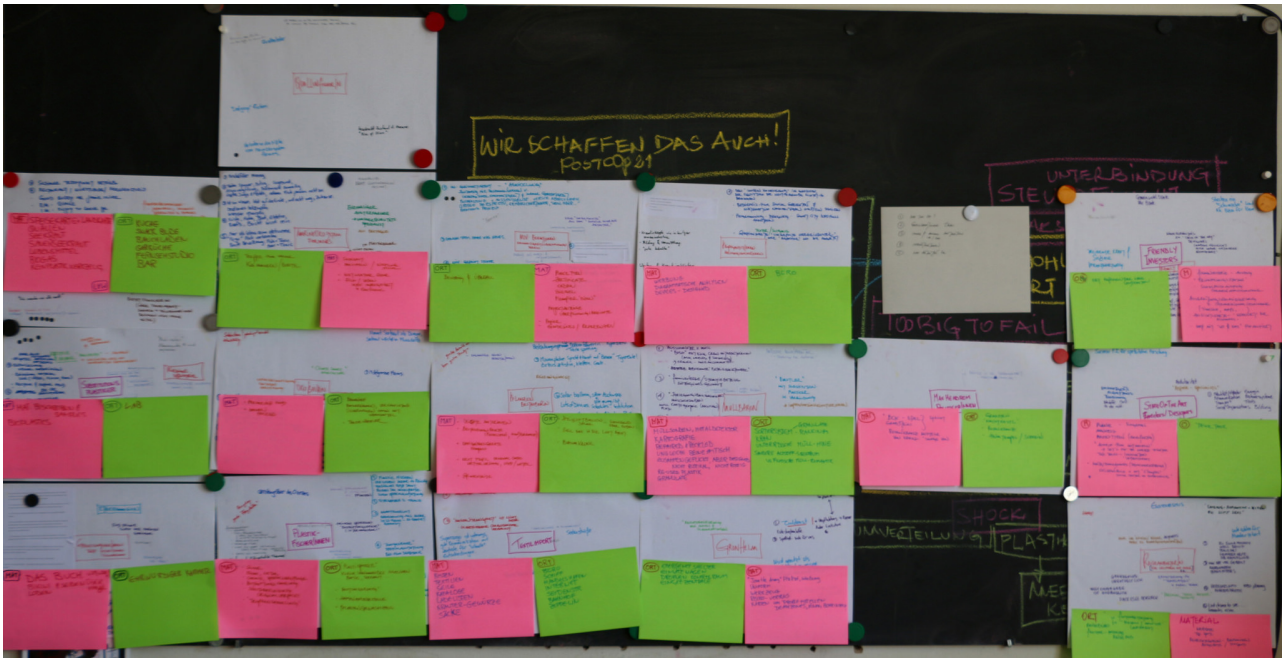
- Global Transparency Institute, mostly a reaction to the Panama papers and our investigations around flags of convenience in shipping, along with the increasing lack of clarity about responsibilities and benefits in an ever growing globalised economy.
- Tramp-Trade share market as an umbrella organisation for non-regular sail transport, based on the model started by *TOWT* in France with their multiplicity of small vessels transporting goods.
- An overarching resource administration in order to regulate the exploitation

of raw materials for future generations, giving us the Global Authority for Sustainability, based upon the idea of a NÜV (the wonderfully Germanic Nachhaltigkeitsüberprüfungsvereinigung) that would replace the TÜV, the technical testing authority.

The next step is to begin to populate the world, creating a slice into a specific community. This involves finding and defining stakeholders, developing job descriptions, scopes of duties, tasks and passions, determining individual characters active in these circles.

Imagine an economic system, which doesn`t run for profit but for generally sustainable developments and designs. Imagine a policy, clearly controlling (if not banning) the mining of raw materials and focussing on waste prevention, renewable energies, recycling, reusing and restoring. Imagine a transport system unshackled from fossil-fuel energies. Imagine the consequences of such a transportation in terms of global trade, manufacturing and labour conditions. Imagine an order along which ecological restoration and the examination of correctly implemented sustainability (socially, environmentally as well as economically) became the only areas of responsibilities of military task forces. Imagine toxic patches of oceans, infested by piles of plastic and other toxins, hosting only a minimized and inedible fish stock with the exception some special types of jellyfish. And imagine the effort to fight against such facts.

For all those and even more imaginations we portrayed fictional characters playing roles in that framework of a possible future. One favourite one is the highly talented jellyfish cook. She is a young woman, migrating to Europe from a coastal region of China when she was a baby. She started her own little snack bar in a harbour environment, the bordering ocean is badly damaged, the sea-level risen, yet still allowing the use of the area. Her little pub became a social hub for all the residents and transients. She established a strong network with all adjoining, mainly organic farmers, using their products in her kitchen as well as trading them if costumers interested. But she is only one in a long list of characters.



Design for and atmosphere

As we have a preliminary skeleton of our possible future, some first, dominating values, beliefs and world-views, as well as several institutions and organisations, inhabitants, residents and stakeholders, we started to sketch possible appearances of this conjectured future. As our final objective is the translation of this process into a physical narrative.

We entered that next process step with two rather simple questions: what tools, materials, machineries do the characters need for their existence and where do they operate, work and/or live?

Through that process we not only deepened our understanding of what each character is standing for, but, through intensifying why they are doing what they do, we even re-shape and develop the whole future scenario. We accent certain aspects, find conflicts and frictions, which either need to be taken out or intentionally emphasized. We draw connections between individual characters and work up details in their back-stories.

Bit by bit we modelled possible physical appearances of certain relevant fragments approaching possible representations of basic values in our sketched world and collect ideas for placing traces for our absent characters. Through verbal descriptions, supported with poor sketches as well found footage we moved towards a possible atmosphere and a basic look of a staged and tangible version of the possible future in a climate and system changed world.

The large scale physical elements that were developed for the first iteration of the piece are the bar, the harbourmaster`s office, the ocean, access to the algae farm and the pollinator`s balloon basket.

Fragments of an embodied possible future scenario

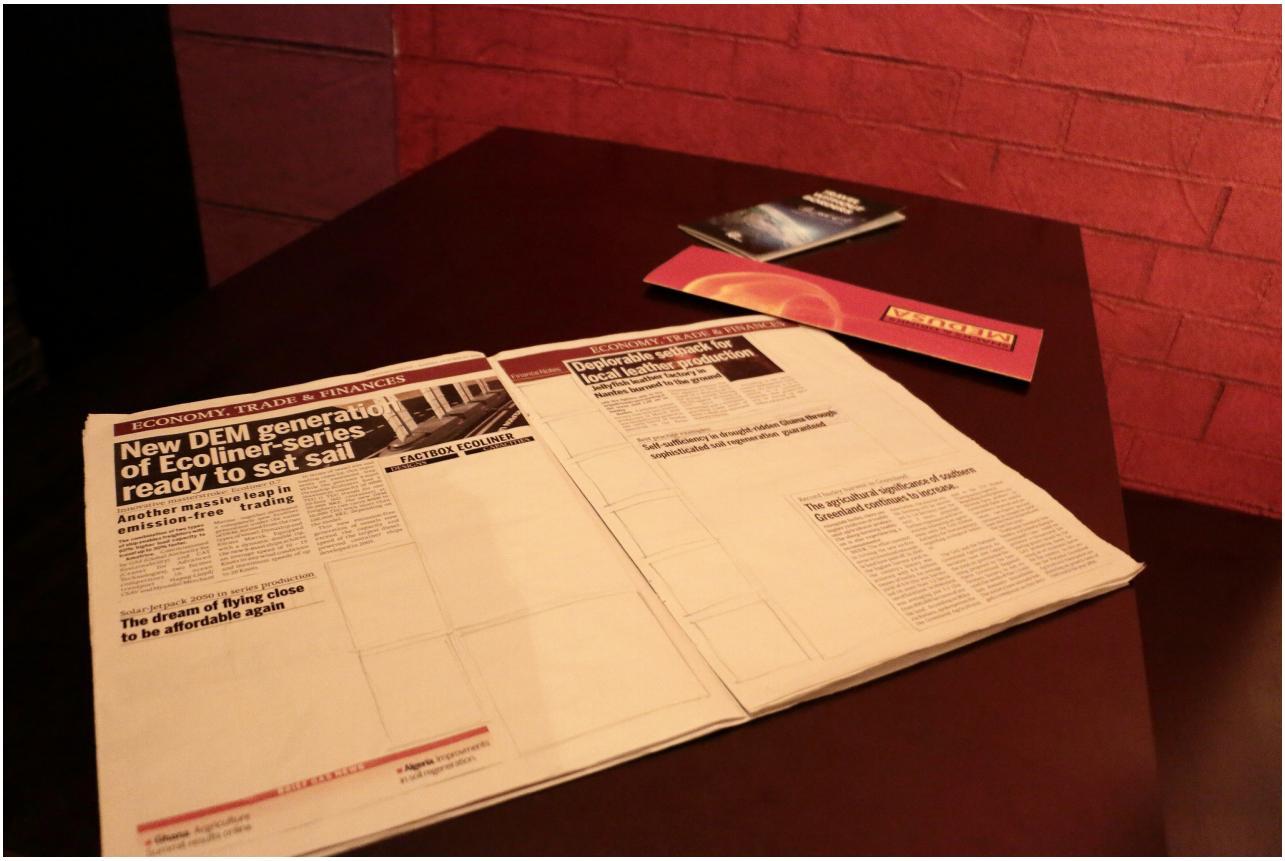
A physical narrative does not exist in a vacuum. In fact it exists very much as a site-specific intervention, an arrangement of the elements of the narrative in a given physical space. Often we are so strongly influenced by the space in which a narrative is first constructed that it becomes difficult to install it in another space. The character of the walls and floor, the ambient temperature, angles from which light can be shone, all these influences and more come together to help us create the physical narrative as it is installed.

Building a town square in a given room is, to say the least, a challenge. The gallery space in RIXC is at least relatively neutral, it has high ceilings and one main open space within which we could assemble the parts of the story. The square is adjacent to the sea, with the door to the

harbourmaster`s office immediately adjacent to the fence that should keep the casual visitor from coming into contact with the poisoned ocean. The ocean undulated with simulated waves underscored by the sound of water lapping on the harbour walls. By using a nonlinear scaling of the ocean, we were able to compress the first few nautical miles of coastal waters into the six-meter space available at the end of the gallery.

The harbourmaster`s building and the bar were constructed as theatrical flats, coated with concrete based rendering and painted to give a proper feel of masonry and a solid building. The pollinator`s balloon basket lies on the opposite side of the room, the natural fibre suspension ropes hanging loosely from above where the imagined balloon remains suspended, just out of sight. The balloon is tied, like a ship, to an immense rusty steel bollard that underlines the maritime flavour of the city. The fourth corner of the room has the entrance to the Seaweed Farm, with a bundle of sea-slime coated plastic rubbish hanging from the fence.

The room was kept dark, the time is early evening and the moon is slowly rising. Maintaining the dark feeling of a post-cheap electricity world where illumination must be kept effective while maintaining readability of street signs, newspaper and other written details, required a long process of fine-tuning. Some light was less illuminating such as the sweeping cone of the lighthouse perched above the harbourmaster`s office, beaming out to sea, or the shadow of the moon`s glow that had passed through some kind of loading derrick and sailing ship`s rigging before being cast upon the fa□ade of the bar.



The storyline details themselves were most apparent in the accompanying written material. A newspaper, 24 pages of the *Turnton Gazette*, was to be found lying on the outside table in front of the bar, as was the menu and an advertising brochure for the travel and aid organisation *Travel Without Borders*. The Gazette included headlines and some full articles, a summary of the relevant news, where interviews with the balloonist, reports of pollution mining and developments in various regions close to Turnton could be read about. The public was invited to take some time to sit and browse the newspaper, using the physical relics and the textual details as a way to piece together their interpretation of the Turnton world. Posters on the blank concrete wall adjacent to the sea announced the New Neighbours Integration Bureau 20 year celebration, another poster announced the exhibition in the Turnton Historical Museum reporting on the tumultuous times that preceded the current, fundamentally changed, epoch. As the visitors to the space left, they entered the door to the museum, returning to 2016 and the everyday worries that this year has included. The current world as a museum of a past that the future finds somehow uncanny and misguided was the best way that we could find to reflect on a world where, from that dystopian but somehow optimistic future, "Change was our only chance."

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Changing Weathers

Networked responses to geophysical, geopolitical and technological shifts across Europe

ABOUT THE PROJECT

The 21st century is under way and 100 years after the start of the century of "world wars", and a quarter of a century after the fall of the Iron Curtain, we are again experiencing an era of new economic and political tensions and conflicts across Europe. More invisible and complex in nature and seemingly immaterial, they manifest themselves in cultural and political shifts of major dimensions and call for constant and structured reflection. This situation is coupled with anthropogenic environmental changes all around the planet and together they present formidable cultural challenges.

The Changing Weathers project reflects and explores potential adaptation and change strategies connected to these challenges through workshops, open field-based conferences, residencies, exhibitions and cultural actions. It`s a program of (commissioned) artworks, strategies and dynamic infrastructures, that initiate and sustain long-term networked co-operation and exchange between the participating organizations, cultural operators, artists and traditional and indigenous cultural activists.

We focus on exploration of migration of people, capital, ideas, traditional and local knowledge, scientific knowledge, open source technologies and methodologies. We interconnect high and low culture, art & science, local & traditional knowledge (LTK) with scientific approaches to the understanding of natural and social systems. We propagate the rise of the structured DIY movements, and explore historical & cultural origins and potential cultural and creative futures on the North+South+East+West axes of Europe.

CONCEPT AND IDEA: Arctic Perspective Initiative / Marko Peljhan and Matthew Biederman. PRODUCTION: Zavod Projekt Atol / Ieva Auzina, Netta Norro, Uroš Veber. Sonic Acts / Lucas van der Velden, Annette Wolfsberger. RIXC network for art, science and cultural innovation / Rasa Smite, Raitis Smits. The Finnish Society of Bioart / Erich Berger, Piritta Puhto. Dark Ecology / Hilde Methi. Time`s Up / the Team. Ljudmila Art And Science Laboratory / Tina Dolinšek, Luka Frelih, Živa Župan. BOOK EDITORS: Projekt Atol & Partners. WEB DESIGN: Žiga Testen & Kreatorj

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Changing Weathers has been funded with the support from the European Commission. This publication reflects the views only of the authors.

Co-funded by the
Creative Europe Programme
of the European Union