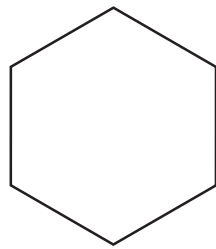

leiden european city of science 2022



programme & playground
playbook II

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work in progress



Since the start of this year Leiden European City of Science 2022 has moved in to her projectspace at the Haagweg. Slowly but steadily, the complete architecture of the year's programme unfolds at the 365-day wall. The Intendant invites everyone to participatively and cocreatingly be part of this process.

foreword

The factor [Z] Science is back!

The year is 2021, it's January. Nothing more changeable than the Zeitgeist, the factor [Z]. It sometimes seems like a toss-up, full of doubt as to whether it will go for heads or tails after the toss.

"Science is back!" was also the headline by Robbert Dijkgraaf, our man in Princeton. In his column in the *NRC Handelsblad* he takes stock after the American elections where Joe Biden, to Dijkgraaf's relief, "finally puts competent experts back at the helm" and - for the first time - even makes one a member of the cabinet. A president who also asks the right questions: *"How can the fruits of science be distributed fairly? And how can the health of science itself be guaranteed in the long term?"* Who knows?

Hard cash. In my role as intendant, a number of very fruitful months lie behind me. Fruitful and intensive. The conditions for good conversation, sharp exchange and free thought were not always ideal, rather digital. Nevertheless, I have spoken to literally and figuratively hundreds of you with enthusiasm. Thank you for that.

Often heard: *"How fine to be able to contribute to a positive outlook."* And so it is. Navigating between the many peaks and sparse troughs of the pandemic, clear contours of our own Twenty Two are emerging in the near distance, the year in which the sky clears and Europe looks towards Leiden.

Often asked: *"And what do we show?"* The answer to that question can be found in this Playbook. Following Playbook I, in which narrative and architecture were given their due, Playbook II takes you into the programme and the playing field of Leiden 2022. In outline - we organise ourselves in three tracks and sixteen clusters - larded with a rich harvest of examples and proposals. Always work in progress.

Invariably, the will to participate, to contribute, to be part of what promises to be a great year. And that feels like a warm confirmation of the path we have taken: an ambitious year with 365 days of programming for everyone with a curious mind.

A taste of the daily three-course menu in 2022? From being freed from the hiccups to Haec Libertatis Ergo. From Oumuamua to Quantum. From Boerhaave to Herman. From space debris to nitrogen. About when the cats are away and what bats would do. About Möbius rings and Knotweed, and Pi in the Pieterskerk and Easter on Easter Island. And about everything that is really important. Who knows?

Curious? Hungry for knowledge? Fancy more? Then read on in amazement. And know where to find me for additional reflections and suggestions!

Lucien Geelhoed
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[C]olophon

*ECS22 Playbook II, version 1.1
Leiden, February 2021*

*Playbook II is written and compiled
by Lucien Geelhoed - Intendant Leiden
European City of Science 2022,
commissioned by Meta Knol -
Managing Director of the
Leiden European City of
Science 2022 Foundation.*

*The Leiden European City of Science
2022 Foundation is a joint initiative of
the Municipality of Leiden, Leiden
University, Leiden University Medical
Centre and Leiden University of
Applied Sciences. Many other
partners also contribute generously to
the realisation of the foundation's
objectives.*

Who Knows work in progress



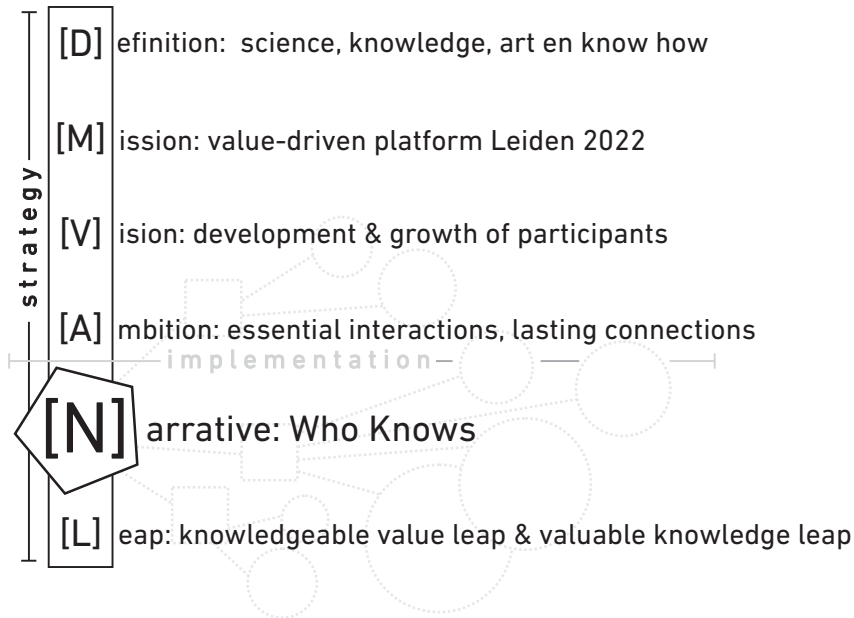
Still from 'Alice The Movie - part 2', the film trailer of Leiden European City of Science 2022 by Pepe van de Kerkhof (1996). The film centres around the curious Alice, here swinging in the Pieterskerk between the bubbles of Leiden 2022. Big questions occupy her in a confusing zeitgeist of truth-finding and deep fakes. The Leiden 2022 program is intended to offer solace.

Where do we come from?

Late 2016, European City of Science came into the picture. With united strength, we travelled from Leiden to Strasbourg and won this prestigious title. It was the kick-off of a - for Leiden standards - exceptionally grand adventure. Never seen here before. Was it a big congress with fringe programming in the year, or a big year with the congress at its heart? In our ambitions for Leiden to make a European leap we knew it: we would approach it as the scientific counterpart of a European cultural capital. We got a lot of support from the European Commission for that approach, and from the partners in city and country. The dreaming began and the foundations were laid. Late October last year, we shared the first results and presented the overarching narrative Who knows and the framework with the three tracks Contemplate, Celebrate, Participate, brought together in Playbook I.

And then it became tangible

Once the allocation was made, a balancing act between patience and impatience ensued. After all, it was still so far away, and at the same time so close. On the surface, we were not always visible - after all, tradition dictates that we only go public after the title has been transferred. In the meantime, it was bubbling well behind the scenes. We have gained experience at ESOF 2018 Toulouse, European Capital of Culture Leeuwarden-Fryslân 2018, Nijmegen European Green Capital 2018, at IMPACTS18 in Liverpool and ICAS11 in 2019 in Leiden itself. Summer 2020 we really took off and the title was handed over to us in a grand ceremonial fashion by our predecessor Trieste. Shortly afterwards, we made the public catch-up and presented the narrative and framework. Since then, we have been positively inundated with responses and requests for talks and presentations. We are on a roll and in the flow. This second Playbook bears witness to that.



Why are we doing this?

In Playbook I we unfolded the leitmotif for Leiden European City of Science 2022. We have embodied this in mission, vision and ambition. In short, in 2022, Leiden will be the European platform for both the entire Dutch knowledge field and for anyone with a curious nature without exception. In times when curiosity is not a given and the search for truth is under pressure, the motto is: all participants in the platform are a little wiser every day. For more in-depth information, context and nuances, please refer to Playbook I. In it, we have summarised the key issues that form the basis of Leiden 2022 in a diagram that we refer to above: the strategic axis contains the definition, mission and vision. The implementation axis with the three [T] tracks is further elaborated in this Playbook II (see page 7).

Which scenarios are conceivable?

A valuable lesson learned from other great titles and years is to think in scenarios. More specifically: budgetary scenarios, which determine the leeway for the annual programming and enable a first start. For the sake of convenience, and so as not to unduly constrain the creative process at this stage, we mention three scenarios for Leiden 2022: In scenario A, we are assured of an initial budget from the initial city partners. In scenario B, substantial additional budgets come into play, from the Netherlands and Europe. And in Scenario C, we manage to extrapolate these with targeted budgets from Europe and close involvement of the business community. With the certainty of scenario A, we started in the summer of last year. Scenario B is in sight and even scenario C - despite the turbulent economic and pandemic times - is not unrealistic.



Prof. Brian Cox, physicist and BBC science program presenter. Figurehead of ESOF 2016 and the Manchester European City of Science that year.



Dr. Beatriz Garcia, expert in the impact and legacy of European Capitals of Culture, Director of Centre of Cultural Value in Liverpool.



BBC News' Jon Snow, host of the IMPACTS18 conference in Liverpool on the impact of 30 years of European Capitals of Culture.



Oeds Westerhof, one of the directors and intendant of LF18 Leeuwarden-Fryslân Cultural Capital of Europe 2018.



Vicky Rosin, ESOF 2016 Manchester Programme Director, during her presentation at CORPUS Congress Centre in Oegstgeest.

Where are we now?

With the release of this second Playbook, we are kicking off the actual programming. Bearing in mind Scenario A, we initially set out to give the existing a place. In addition, we encourage the many enthusiastic parties we meet in the city and in the country. With scenario B in the offing, we can start scaling up.

In practical terms, the coming period will be about mobilising. Many sessions are planned in the period ahead, with cultural partners, venues, retailers, educational parties and many others. Further explorations with parties in the national knowledge field are also on the agenda and we maintain the excellent relationship with the European Commission.

To all those who would like to contribute their thoughts, offer ideas or get involved in some other way, we invite you: be welcome in our project room to take a look at the 365-day wall, share ideas and get inspired. The pandemic is affecting us, so an envisaged walk-in clinic cannot take place for the time being. Nevertheless, we are constantly finding alternatives to move forward co-creatively. Do not hesitate to contact us!

How do we go about it?

We identify five situations in which activities can lead to [H] hotspots and thus become part of the programme: existing activities, spontaneous initiatives, stimulated activities, commissioned activities and own productions.

1. Spontaneous initiatives

The tour in recent months confirms previous experience: both in Leiden and in the country a lot is organised. This mostly excellent programming is often limited in scope. The focus is understandably on the activity for own supporters. The assortment is

strong but fragmented and unconnected. There are opportunities and threats lurking here. The risk is that a multitude of activities will get in each other's way, and may (unintentionally, unconsciously) compete with each other. Good coordination limits this risk. It also brings to light elegant activities that currently remain under the radar.

It also offers plenty of opportunities. By joining forces or seeking coordination in a slightly milder form, surprising combinations can arise and fields of interest can overlap in a refreshing way. Two examples that will find their way into Leiden 2022: all the 'worldly' activities that come together under the bubble Leiden Global and the hundreds of public lectures that come to a joint annual agenda under the bubble Studium Leydense (see right-hand column).

2. Spontaneous initiatives

We know from external experience that the power of expression of the title European City of Science is so great that parties are eager to join in and connect with it. This already yields a great variety of proposals for "spontaneous" initiatives. All with the request to be included in the Leiden 2022 annual program. We warmly welcome many propositions, bearing in mind the principles of Playbook I, the space and the positioning in the programme and the level. Content always comes first; and the intendant makes the final choices here. The stimulation of own initiatives by knowledge institutions and other parties is part of the scenario A route. The results have found their way into this Playbook. Striking examples are the TEDx initiative of the Leiden Bio Science Park and the celebration of the 10th anniversary of the UNICEF chair in children's rights.

3. Stimulated activities

One way of creating order in the fantastic cacophony of existing and spontaneous activities is to fill in the 'missing link'. An activity that closes the chain. A number of organisations has allocated budgets for programming, but have not yet put them into practice. And sometimes an organisation is simply still too unfamiliar with the plans for Leiden 2022. In these cases, the intendant focuses on stimulating (or co-creating) new initiatives or expanding and scaling up existing plans in the context of the focus areas of the annual programme.

4. Assignments to activities

Depending on which budget scenario becomes reality, there will be room to accommodate activities that will benefit Leiden 2022 as a whole. Although we are convinced that we can programme a successful year in Scenario A, overarching activities are desirable for reasons of impact and reach. In particular to position Leiden European City of Science 2022 also in a European context, attractive international programming is a must. We looked closely at how the European Capitals of Culture could or could not make the distinction. An example close to home: Leeuwarden 2018 made good use of the giants in terms of momentum, deliberately relatively early in the programme. Mission accomplished: the whole of the Netherlands knew what Leeuwarden stood for that further year.

Exactly how we want to proceed with assignments is not yet set in stone. We see a distinction between open calls for certain key moments in the annual program where we like to be surprised by creative proposals. In other situations, it is logical to focus and address a particular organisation or creators on his or her specialisation, in order to add a specific element to the annual programme of Leiden 2022.



Leiden Global: world trip

What is Leiden Global's common thread? Think for example of LUCIS with its Middle East Culture Market, the Japan Market of the SieboldHuis, the permanent collection of the Museum of Ethnology, an exchange with sister city Torun in Poland - the birthplace of Copernicus. Someone who follows the common thread within the Leiden 2022 programme can take a trip around the world to almost every continent in the world.

Studium Leydense: interchangeable target groups

With Studium Leydense, we aim to achieve a coherent range of public lectures in Leiden 2022. Dozens of organizers serve their supporters with poignant and curiosity-creating lectures, sometimes with more than 50 lectures per year. How nice would it be if the loyal fan base of, say, an astronomical society or a historical society becomes interchangeable and all organisers can count on more than the usual attention and ditto visitor numbers. Leiden 2022 also wants to use these connections to create a foreknowledge indicator: for the organiser a yardstick against which to measure the level of foreknowledge required and for the target group a useful tool to prevent deception and incorrect expectations. This includes, for example, ages (children, young people) and the language of the lecture (expat-friendly). The layman's talk sometimes calls for a definition of the layman.

Generating curiosity is the basis of the Leiden 2022 annual program. The Droste-effect is a good example of this. The infinity that is hidden in this famous tin can has inspired generations and literally and figuratively given their imagination an extra dimension.



5. Own productions

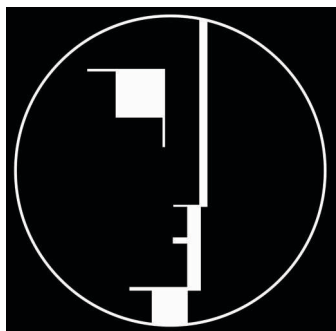
In at least two bubbles, the Leiden European City of Science 2022 Foundation will organise activities under its own direction. One is, of course, the large multidisciplinary EuroScience Open Forum conference. The other is the comprehensive Knowledge through Neighbourhoods project, in which we visit 101 neighbourhoods with a different topic each time. As higher scenarios come into view, room can also be created here for more own productions.

These five variants of the route to supply in the annual programme determine the course of the intendant. However, it is not a rule book from which third parties can derive rights. The final programme will be determined by the intendant, by order of the Leiden European City of Science 2022 Foundation.

What will take root later

Our mission is to establish Leiden 2022 as a valuable knowledge platform and to make all participants in this platform a little wiser every day. However, our motivation goes beyond that. We are also keen to make it more permanent: questions should always be able to be asked and access to answers always guaranteed. We therefore see new opportunities in Leiden that are in line with the annual programme in 2022. Quite simply, which may result from a successful realisation of that annual programme.

Technologically modern fireworks: drone formations adorn the evening sky. In this case, a setting from 2016 with 100 drones. A world record then. By now, formations with 3,000 drones are not uncommon. The sky is the limit. Foto Intel Corporation.



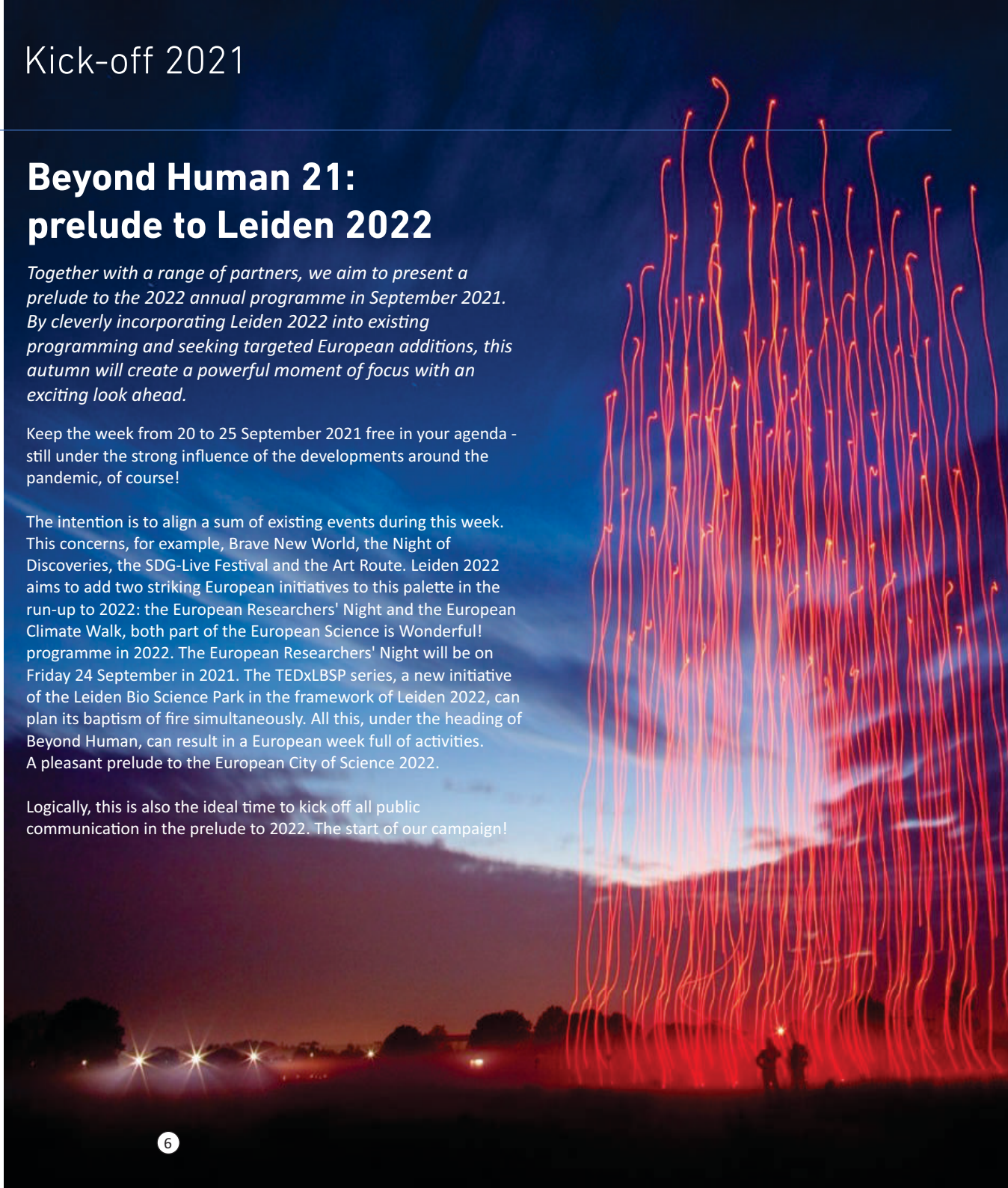
Beyond Human 21: prelude to Leiden 2022

Together with a range of partners, we aim to present a prelude to the 2022 annual programme in September 2021. By cleverly incorporating Leiden 2022 into existing programming and seeking targeted European additions, this autumn will create a powerful moment of focus with an exciting look ahead.

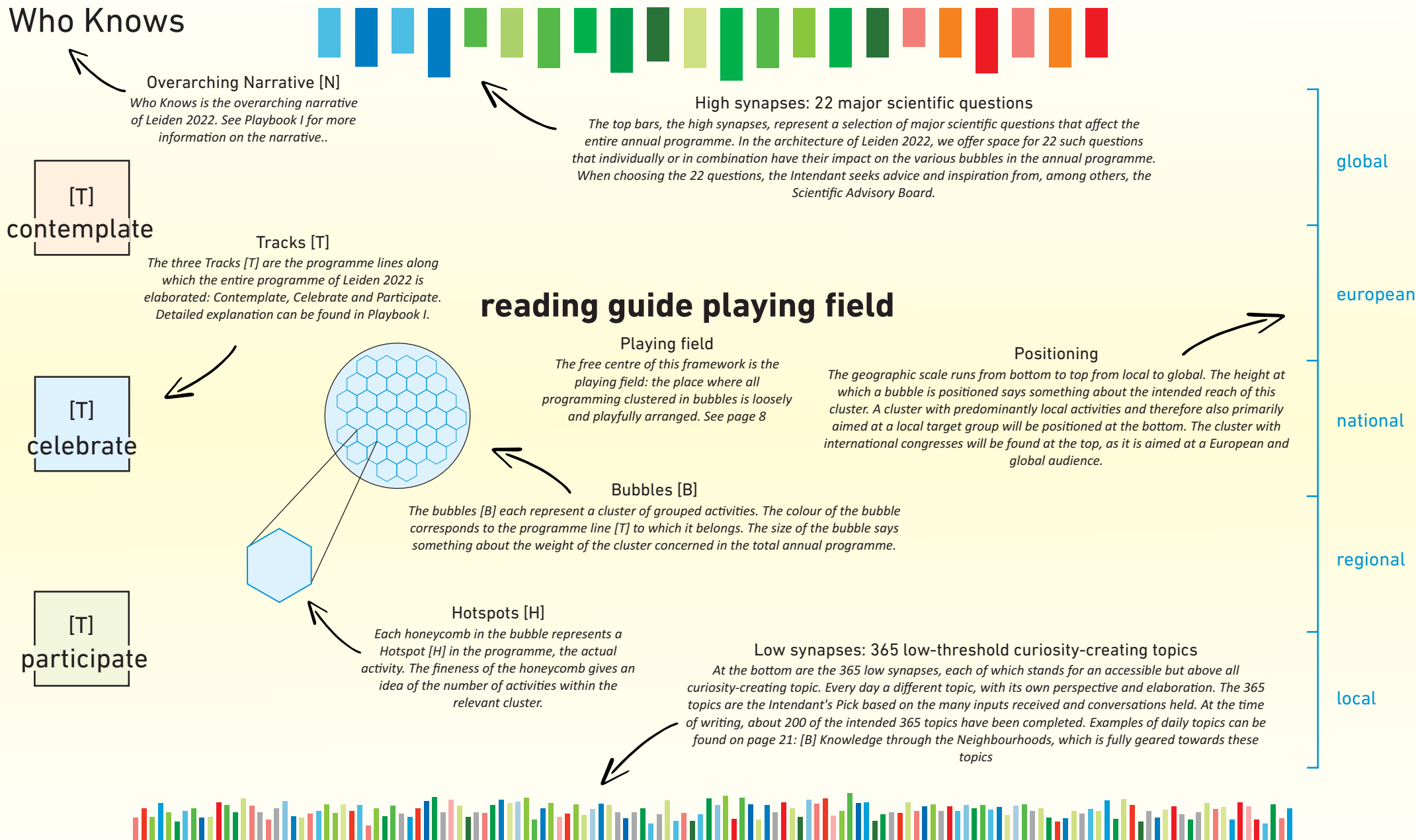
Keep the week from 20 to 25 September 2021 free in your agenda - still under the strong influence of the developments around the pandemic, of course!

The intention is to align a sum of existing events during this week. This concerns, for example, Brave New World, the Night of Discoveries, the SDG-Live Festival and the Art Route. Leiden 2022 aims to add two striking European initiatives to this palette in the run-up to 2022: the European Researchers' Night and the European Climate Walk, both part of the European Science is Wonderful! programme in 2022. The European Researchers' Night will be on Friday 24 September in 2021. The TEDxLBSP series, a new initiative of the Leiden Bio Science Park in the framework of Leiden 2022, can plan its baptism of fire simultaneously. All this, under the heading of Beyond Human, can result in a European week full of activities. A pleasant prelude to the European City of Science 2022.

Logically, this is also the ideal time to kick off all public communication in the prelude to 2022. The start of our campaign!



Who Knows



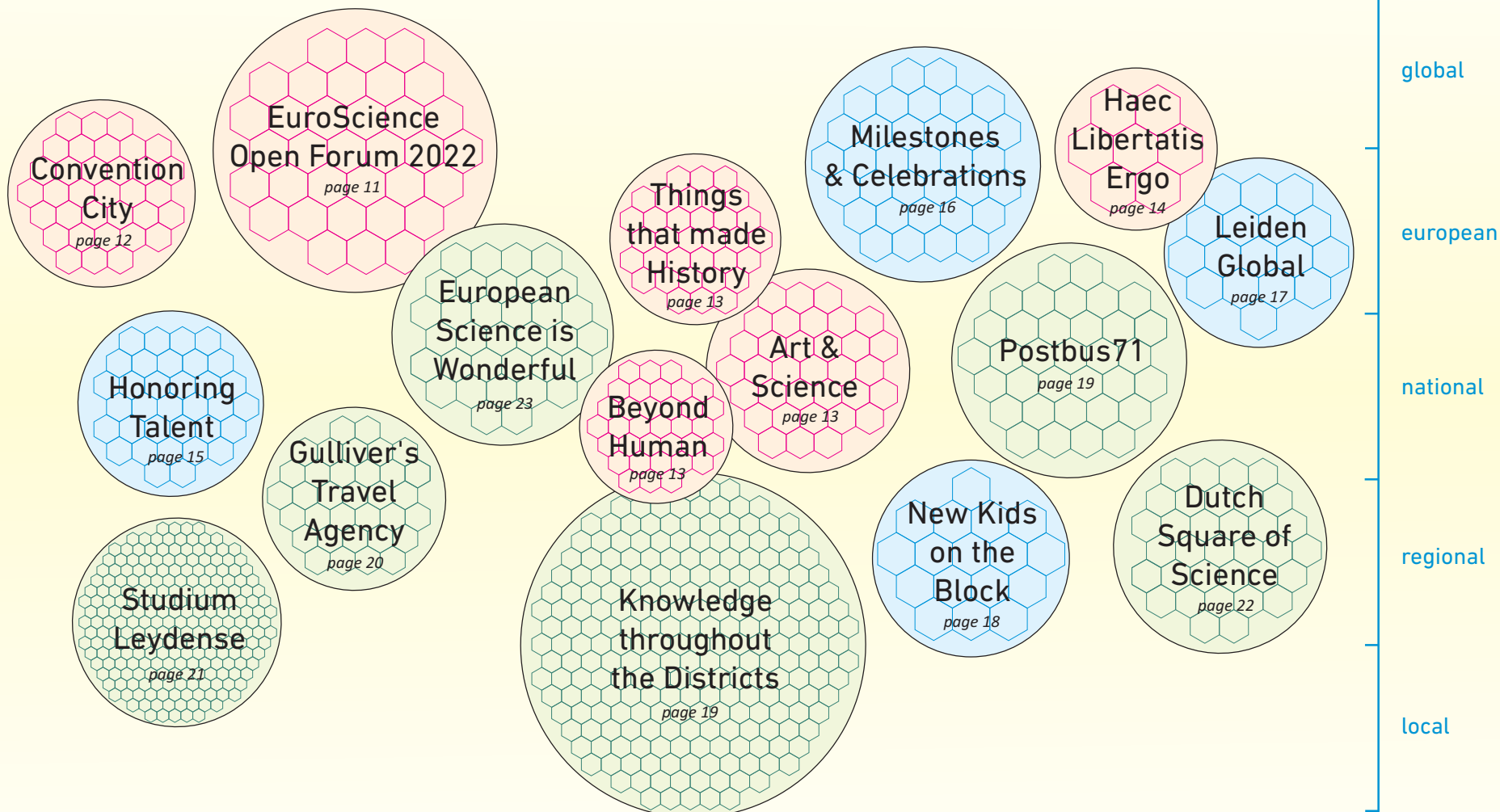
Who Knows



[T]
contemplate

[T]
celebrate

[T]
participate



"Doubt in science is the necessary fundamental attitude."

Arthur Rörsch (1933-2020)

Science Renaissance

The 'Science Friction' at the top of this page harks back to the title of the essay of the same name by Arthur Rörsch, who passed away last year. In it, he made a plea for a new Renaissance of science. A period in which it liberates itself from the yoke of political control and goes back to basics. A basis in which curiosity is the starting point, so that we can arrive at genuinely new insights and thus rigorously resolve the really pressing issues.

"It is precisely broad, fundamental research that is the source of major breakthroughs. Fortunately, I had all the time and freedom to do that."

Lex van der Eb (1934)

Coincidence: Van der Eb's immortal cells

A scientific coincidence by Leiden virologist Lex van der Eb, over twenty years ago at the LUMC, now makes it possible to develop a vaccine against the COVID-19 virus in record time. It illustrates the importance of free space for fundamental research in a casual atmosphere. It raises the question whether science today has the space and permits the "unobtrusive" experiments that will lead to breakthroughs in, say, twenty years' time. The essence of these breakthroughs is still hidden in the future.

As early as 2007, public voices were calling for Van der Eb to be awarded the Nobel Prize.

Science Friction: with a view from outside

If you look at science as a dynamic whole, you will also see the influences of the factor [Z], the Zeitgeist. Scientific breakthroughs follow each other in rapid succession: we can zoom in more precisely, see further and further, move Pi up a few more decimal places and artificial intelligence once again beats the human brain. You can hear anyone who would look with a pampered look think: again? Another proof of life on Mars, another exoplanet discovered, another missing link laid in the evolution of man. The time when we collectively fell silent in amazement, as with that 'One giant step for mankind' in 1969, seems to be behind us. The daily supply of scientific scoops may have dulled our ability to wonder and put our curiosity on hold. While it is precisely this curiosity that is the foundation of science. The hunger for knowledge and the urge to pursue answers. Hasn't everything already been named, discovered or invented? Not at all. Science knows: there is more we don't know more than we do.

In 2022, Europe looks to Leiden as a European platform of the Dutch knowledge field. Europe sees the collective of the 86 Dutch faculties, each highly regarded, displaying the crème de la crème of Dutch science. And with everything that is still in the making, from talent to patent.

The 86* faculties as the academic continuum

Looking at the Netherlands, one sees an outstanding and broadly developed field of knowledge with a highly regarded international reputation. At the heart of this field are the 86* faculties of the country: the suppliers of talent and new scientific insights. These faculties all produce (top) scientists, and form the free breeding ground in which research thrives and is given continuity. Under the banner of these faculties, a legion of scientists are venturing into national and international challenges. Often the starting point for cross-border and multidisciplinary cooperation and the dissemination of Dutch expertise worldwide. We are happy to offer this legion, individually or collectively, a generous stage in 2022.

Scientists at the cutting edge of 'knowing' and conscience

The scientists themselves are the calling card of Dutch knowledge. Individual figureheads of our collective knowledge to the state of the day. This is how we encounter our figureheads in the media on a daily basis. There always seems to be a professor on duty when it comes to reflecting on what's going on. Not a newspaper or current affairs column goes by without a scientist speaking. A fine exponent of Holland Knowledge Land. Those who know may tell. The risk of Dr Clavanism lurks. In her column in *De Volkskrant*, Ionica Smeets came to the realisation: "You always do it wrong as a scientist in a talk show." She believes that scientists should engage more in public debate, but at the same time be transparent about what they do not know. She outlines the fascinating internal dialogue between the knowledgeable scientist who also has a personal opinion, and the presenter who actually does not want to make a distinction in this respect. Food for thought: what is the role of scientists as the figureheads of knowledge today? In Leiden 2022, we would like to put scientists in the limelight with new enthusiasm and in an innovative way, because knowledge sharing matters to society. Sharing is multiplying.

"Is it about knowing or about asking?"

Roosmarijn van de Velde (1995)

* Dutch faculties

When selecting faculties, we use the definition of the Rathenau Institute. University organisations are traditionally composed of faculties that form the basis for (disciplinary) education and research. With the advent of an increasing number of (inter-faculty) research institutes, more focus has been placed on research from within the faculties. The 86 faculties belong to the 13 Dutch research and technical universities in the WO (scientific research) field.



22 Big Questions anno '22

Science: cradle for 8 billion

The rate at which the world's population is increasing - doubling from 4 to 8 billion in less than 50 years (expected by the end of 2022) - raises major issues. Science is the source of solutions. This requires science to look at itself and explore new systematics. For example, Transformative Science, in which science takes on an open, actively participative role to bring about real transformations in co-creation with society. Because people have questions. Many questions. Citizens all over the world are wondering what our future will look like, and many are grappling with the big issues of our time. Of course, science has an essential function in the search for answers to these questions. Leiden European City of Science also has the ambition to connect science and society. Therefore, we put together a palette of 22 Big Questions that are or can become important for communities in Leiden, the Netherlands, Europe and on a global scale.

The narrative Who Knows naturally already leads to a range of relevant questions. For which big questions are the most urgent? What do we already know and what do we actually do with that knowledge? Who asks the questions about what nobody is working on yet? How curious are we about the unknown? And who decides what the important questions are anyway? It is an exciting exercise to arrive at a weighted choice worthy of the title European City of Science. We strive for an uncompromising palette of questions that stand firm, that are a source of inexhaustible curiosity and that lead to astonishment. We kick off the search for these 22 questions in this second Playbook, consider the considerations and illustrate them with examples.

Open mind

The field is open. And there is a whole world in that word "open". An open mind is the prerequisite for science driven by curiosity. But openness in the sense of transparency is also important. That means: sharing knowledge. It leads us to questions such as "What is Open Science and how can it be applied in an integrated way?" From the implementation of GO FAIR principles to the utopian pursuit of an unambiguous definition of Open Science worldwide. All this results in at least one position with an open question in our palette.

Science about science

In line with this, it is also interesting to take a longer look at science itself. Not all questions in the palette need to lead to a Eureka! moment or be falsifiable. Questions in which science reflects on itself are also relevant, especially in these times of system change. A number of candidate questions pop up around the inauguration of President Joe Biden. He confronted his science team with five essential questions. Some are rather self-serving: "How to stay at the forefront of technology, especially in competition with China?" Others link directly to the spirit of the times: "What can we learn from the pandemic about public health?" and "What breakthroughs are needed to halt climate change?" Two questions are about science itself: "How can the fruits of science be fairly distributed?" and "How can the long-term health of science itself be ensured?" These are clear candidates for the 22-palette.

Classic questions

Man has been asking questions since time immemorial. To and about themselves. To his or her Umfeld. About the visible and invisible world. As far as our collective memory goes back, a number of classic questions torments us. It is fitting for Leiden 2022 - in the environment where philosophers came to great insights, such as Descartes' Cogito ergo sum - to make room for these classic questions.

A universe of questions

It is not uncommon for scientists, organisations and media with a scientific bent to attempt to identify and order the really big questions. This resulted in compact top 10s and bulky books with hundreds of big questions. Or in concrete routes, such as the 25 routes of the National Science Agenda (NWA). We do not need to reinvent the wheel: we are, of course, also browsing these already asked questions. It's a matter of making a smart choice to colour part of our palette.

The power of simplicity

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Urgent matters

This brings us to the last and most important angle: topicality and urgency. Major challenges plague the world and call for immediate action. Climate, migration, population are examples of this, as is the pandemic. People and opinions are tumbling over each other everywhere, and so the answers to big questions are being fought over in the public arena. Everyone is entitled to his or her own opinion. At the same time, there is urgency and that calls for a well-founded inclusive approach. Sharing knowledge is then essential. Participatory science is going to make the difference. How can we ask big, urgent questions in such a way that they become relevant and understandable for as many people as possible?

Question 22: a catch 22?

We reserve the 22nd position in our Great Questionnaire for a paradoxical question: "Which question has not yet been formulated by anyone?" The Swedish professor Hans Rosling (1948-2017) came up with this question when asked. In doing so, he answered the call to think of the biggest question facing science.

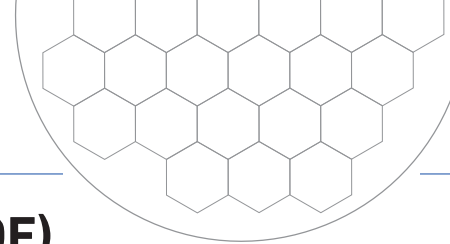


Who knows the unknown?

The unknown as an infinitely curiosity-inducing source of inspiration for science. We have no view of 97% of the universe. 95% of the oceans are still completely unknown to us. We have not yet mapped 85% of all species on earth. We still know very little about the human brain... A tempting perspective of not yet knowing. Food for big questions.

Top Notch Keynotes

Big questions call for big names. The annual programme of Leiden 2022 includes a number of moments in which we invite internationally renowned speakers with outspoken opinions to the podium. The backdrop for this appealing stage is, for example, the official opening of the European City of Science, the Freedom Lecture, the ESOF congress, the European Science is Wonderful programme and the TEDxLBSP. These are perfect moments for Leiden to draw European attention to itself, for Leiden to live up to its hospitable reputation and to feel honoured by the visitors it receives.



10e EuroScience Open Forum (ESOF)

Scientific Advisory Board
For the scientific content of the ESOE congress, an advisory council has been set up in which all faculties of Leiden University are represented.

Distributed Model

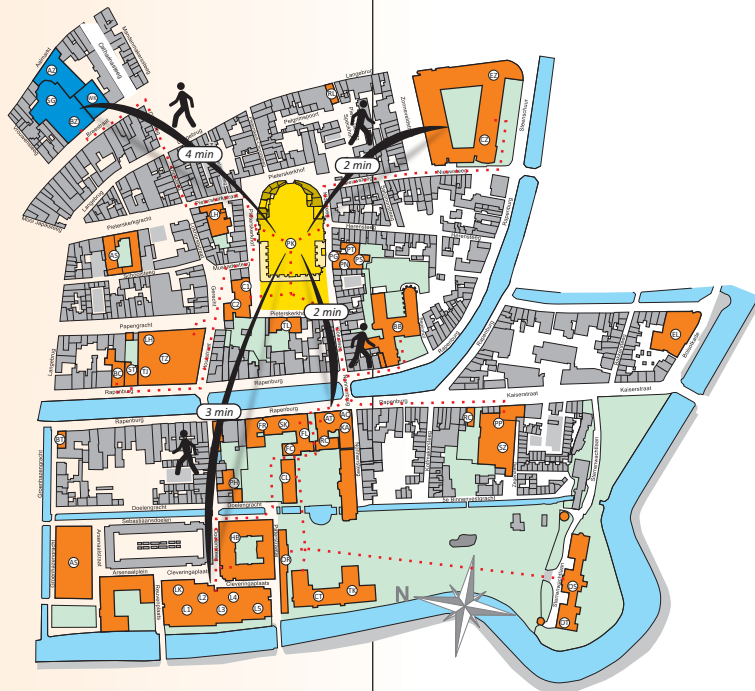
Inspired by the experiences of the 2020 hybrid edition in Trieste, a new ESOE model is in the making. Leiden fulfils The leading role as a central hub, while side events (connected online) are held simultaneously in a limited number of other European cities. It is not yet known which ones, but it is likely that we will see some of the previous host cities of ESOE there as well.

Leiden joins a list of illustrious European cities that have previously had the pleasure of hosting the biennial ESOE congress. The 10th edition in Leiden was preceded by Trieste (2020), Toulouse (2018), Manchester (2016), Copenhagen (2014), Dublin (2012), Turin (2010), Barcelona (2008), Munich (2006) and Stockholm (2004).

The organisation of the Leiden edition is in the hands of two "Champions": archaeologist Prof. Dr Corinne Hofman - winner of the Spinoza Award - and rheumatologist Prof. Dr Ferry Breedveld - former chairman of the LUMC board. They will be substantively supported by a Scientific Advisory Board (see page 10) and in the implementation by the project team of Leiden 2022.



Leiden won the 2017 ESOE bid in part because of the authentic 'scenery' in which it wants the congress to take place: the historic city centre of Knowledge City Leiden.



The Golden Age scenario where the Pieterskerk will be used as a central base and exhibition floor.

Multidisciplinary approach

The ESOE congresses, the largest of their kind in Europe, are characterized by a multidisciplinary approach. The grassroots organisation behind ESOE, EuroScience, based in Strasbourg, aims for 'a positive change for society' and is committed to a multidisciplinary approach to science. In line with this thought and tradition within the ESOE culture, the champions, in consultation with the Scientific Advisory Board, a title formulated for the ESOE 2022 edition:

Crossing Borders Engaged Science, Resilient Society

This title addresses the manoeuvrability of science towards society, and vice versa: the urgency of the big questions facing humanity. The ESOE 2022 program will be built up along multidisciplinary clusters in which these questions are central (see page 10).

Recurring ESOE elements

Apart from the classic conference format with a multitude of sessions and panels, the ESOE concept has a number of recurring programme-parts The 'Careers Program' and the 'Science to Business Program' are appealing examples of this.

Questions are central in the careers program such as on academic career formation, talent development, how to apply for funding, but also how to pursue a healthy lifestyle in a competitive and often demanding academic environment. The science to business program focuses on public-private partnerships, legal aspects that are involved in knowledge-intensive entrepreneurship (e.g. valorisation, IP) and - more fundamentally - how to start a company as a start-up. In both parts of the program, input from the business community is part of the concept. A number of multinationals, such as Elsevier and Airbus, are among the frequently returning partners of ESOE.



Prof. dr. Corinne Hofman
(Champion ESOE, co-chair
Scientific Advisory Board)



Prof. dr. Ferry Breedveld
(Champion ESOE, co-chair
Scientific Advisory Board)



Prof. dr. Rick Lawson
(Faculty of Law)



Prof. dr. Ewine van
Dishoeck
(Faculty of Science)



Prof. dr. Rob Zwijsberg
(Faculty of Humanities)



Prof. dr. Kutsal Yesilkagit
(Faculty of Governance
and Global Affairs)



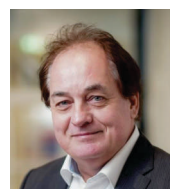
Prof. dr. Frits Koning
(Faculty of Medicine)



Prof. dr. Hannah Swaab
(Faculty of Social Sciences)



Prof. dr. Pieter ter Keurs
(Faculty of Archaeology)



Prof. dr. Wim van den Doel
(Dean Leiden-Delft-Erasmus)

International Congress City

In the Netherlands, Leiden stands out as a conference destination. Leiden is 5th on the national list of favourite cities to hold multi-day international conferences (ICCA ranking). A proud position between the big cities and their extensive venues. An often heard argument: a real historical city of knowledge, the Oxford of the Low Countries. Especially in the periphery of LUMC many medical congresses find their way to congress city Leiden.

International Congress City (2)

Back in time for a moment. It is 1892(!) and we are in Moscow. The 2nd International Zoological Congress is about to close. Euphoria! During the closing ceremony, Leiden was appointed to organize the 3rd edition three years later, in 1895. The State, the Royal Family and the Dutch Zoological Association all contributed financially to make it a success. Queens Emma (as regent) and Wilhelmina showed curiosity and also attended the congress.

Leiden Convention Bureau

The Leiden Convention Bureau and its network of ambassadors of over one hundred professors are key in the acquisition of scientific congresses from a Leiden perspective. The LCB therefore plays an active role in the congressional part of Leiden 2022.



International congresses en general assemblies

Congresses, symposia, conferences, general assemblies... For decades the ultimate scientific platforms for debate and knowledge exchange. Traditionally (see left column), Leiden has been a place for scientific rendezvous. And it will be no different in 2022. In the run-up to Leiden 2022, the contours of a record year in the number of meetings to be expected are emerging. Truth be told, the pandemic has hit this sector disproportionately hard and deeply, resulting in a kind of global plate tectonics: many conferences are adrift. At least in its classic form. The sector is facing a challenge to innovate and become more sustainable, and Leiden 2022 is keen to be the scene of that experiment. A number of congresses will of course take up the challenge and aim for an innovative congress model in 2022: sustainable and hybrid.

[IH] 6th NHRIC

In the spring of 2022, Leiden will host the 6th edition of the Nursing Home Research International Conference. A conference entirely devoted to care for the elderly in nursing homes. A topical subject in relation to the pandemic and also because of the excess mortality caused by heat stress during heat waves.

[IH] ISOO 2022

The international congress of the International Society of Ocular Oncology (ISOO) has already chosen Leiden as its host city. The multi-day meeting is dedicated to ocular oncology. Prof. Dr Martine Jager, ophthalmologist at the LUMC, is president of the ISOO and champion of the congress.

[IH] 10 years UNICEF-Children's Rights Chair

In 2022 it will be exactly 10 years ago that Prof. Ton Liefwaard, LL.M., accepted the UNICEF Chair in Children's Rights. To reinforce this fact and, above all, the quest for children's rights, he is organising an international congress in cooperation with UNICEF.

[IH] International Summit Practical Research

Leiden University of Applied Sciences will seize the opportunity of the completion of the new building to organise an international summit on practical research, one of the university's spearheads, in the autumn of 2022.

[IH] 5th Biennial CRG Conference on African History

The 3-day congress of the Collaborative Research Group African History will be held at the African Studies Centre in Leiden in 2022. Part of the conference is the "Exciting Lecture on African History"

[IH] Rencontre Assyriologique Internationale

The meeting of the International Assyriological Association, originally planned for 2022 in Leiden, has been postponed to 2023 due to the pandemic with a domino-effect. Turin, the original host city for 2021, will now host the congress in 2022.



Netherlands Congress Country

The success of Leiden as a congress city is not unrelated to the fact that the Netherlands is popular among congress organisers. A multitude of major international congresses will visit our country in 2022. Leiden 2022 seeks cooperation and exchange in this, for example with a mutual outreach programme. With the necessary reservations a selection from the international congress agenda for the Netherlands in 2022:

• **ICT2022 - XVIth International Congress of Toxicology** - September, Maastricht

• **24th BGSC - Annual Colloquium of the International Board Game Studies** - Leeuwarden

• **IMC12 - 12th International Mycological Congress** - July, Amsterdam

• **IRMMW-THz 2022 - 47th International Conference on Infrared, Millimeter and Terahertz Waves** - September, Rotterdam

• **ASSC25 - Association for the Scientific Study of Consciousness** - Amsterdam

• **ECRS 2022 - 27th European Cosmic Ray Symposium** - July, Nijmegen

• **ECWSR 2022 - 11th European Conference for Social Work Research** - Amsterdam

• **ISPAD 2022 - 48th Annual Conference International Society for Pediatric and Adolescent Diabetes** - October, Rotterdam

• **IMSC'22 - 24th International Mass Spectrometry Conference** - September, Maastricht

• **NECTM 2022 - 8th Northern European Congress in Travel Medicine** - Rotterdam

Intuitio

Intuition (literally from the Latin: inner seeing) is called the 6th sense and plays an important role in artistic practice. Yet there has been little scientific research into it. Museum De Lakenhal is researching together with artists and scientists from the Faculty of Social Sciences of the Leiden University this creative space beyond rational thought. The results will be presented in the autumn exhibition in 2022 at the museum.

The Joint Research Centre (JRC) of the European Commission regularly organises the Resonances Art & Science Festival. The work below was part of the exhibition in Brussels in 2015.

Looking differently

In Playbook I we already formulated it strongly: art - in all its manifestations - has an indispensable role in the programme of Leiden 2022. Our definition of Science for Leiden 2022 includes science, knowledge, arts and skills. From hardcore science to craft. Art and science are traditionally linked by the love of experimentation and innovation. Scientific and artistic breakthroughs require the right amount of creativity. That's why the bubble Art & Science has been given plenty of room in the annual programme. We focus on a diverse range of fine, applied, modern and contemporary arts in all its forms, in relation to the sciences and in their own right.

There are plenty of examples of the interface between art and science. The 22 big questions offer an unprecedented source of inspiration for creators. Whether it's fragrance or genes, the patterns of chaos, illuminating beauty or pitch-black gloom, the inspiration is endless... We hope that in 2022 we will be able to enjoy what the creators bring to us from their inspiration and intuition, in images, writing, movement and sound. Appropriate programming in the museums and galleries (such as Rijksmuseum Boerhaave, LUMC) and venues and project spaces (including Old Observatory, ACPA) also contributes to a successful Art & Science programme in 2022.



[B] Beyond Human

A reprise of Beyond Human, which will be held this year as a prelude to 2022 (see page 6), is to be expected.

[B] Things that made history

Another Art & Science related bubble is the umbrella of a number of new and existing ideas, each of which touches in a different way on 'things' that have literally written history or determined its course. One concept focuses on plants that have caused a tipping point, another on books that turned out to be real game changers in (world) history. The already existing Route of Discoveries portrays a number of medical and technological breakthroughs. And the Powers of Ten project in and around the Old Observatory fits in perfectly with this. A bubble full of surprising things that mark crossroads in the Modern Age (or sometimes go back just a bit further in history).

San Francisco Museum of Art, 1963 photo Herb Slodounik. Published in Life Magazine, July 1963 edition.



conference, initiator Alexander Mouret explores the boundaries of art and science.

Call for proposals

In the Art & Science bubble, we are exploring the possibility of working with calls, both open calls and targeted calls for specific programme components.



Churchill

On 10 May 1946, Leiden University awarded Sir Winston Churchill an honorary doctorate in law. With his third honorary doctorate, he felt like 'the most learned man in the world'. He had previously received one in Oxford and in Leuven.



Mandela

Nelson Mandela received an honorary doctorate from Leiden University in 1999. Not only did he play a major role in the abolition of apartheid, but he also brought about worldwide recognition of the value of freedom. In the spirit of Mandela's famous quote, 'Education is the most powerful weapon you can use to change the world,' the university established the Mandela Scholarship Fund. Through the fund, South African students can study for one year in Leiden.

Freedom Lecture 2022

Freedom and Leiden have been synonymous for centuries. With the university credo *Praesidium Libertatis* (or is it *Libertatis Praesidium*? Who Knows?) and the municipal *Haec Libertatis Ergo*, this has been settled for generations. And it is not just words. The city partners repeatedly put their odes to freedom into practice. Whenever people somewhere are oppressed in their freedom or science, they know they are supported and welcome in Leiden. A tradition to cherish and continue. Certainly in this turbulent zeitgeist where truth-finding and freedom desperately need each other. We already have the attention in 2022: perfect timing for a signal, the time for a statement on freedom!

Salman Rushdie, Hanan Ashrawi and Ban Ki-moon delivered a Freedom Lecture in Leiden. Yet in 2022 it will be nine years since the last Freedom Lecture was held at the Pieterskerk.

When it comes to ideals of freedom, we stand on the shoulders of giants. It is important to emphasise this freedom, which is not always obvious, and to safeguard it for the future. With this in mind, we propose to hold another impactful Freedom Lecture in 2022, which has the potential to make a historic difference.

Leiden has a strong tradition of lectures that write history. Examples include the Cleveringa and Huizinga lectures, but also the Veer Foundation, which provides a podium for (international) speakers who make a difference. The Freedom Lecture - in line with this - is a joint initiative of Leiden University, LUMC and the municipality. Sometimes the lecture is combined with the presentation of the William of Orange medal, as was the case in 2013 with Ban Ki-moon.

"A more beautiful motto for a university is hardly possible. But a motto should not only be beautiful; it is also a mission."

Former Rector Magnificus Carel Stolker on '*Praesidium Libertatis*'



Salman Rushdie (2010)

When author Sir Salman Rushdie first gave the Freedom Lecture, he had been sentenced to death for over 20 years. Rushdie, who is considered a champion of freedom of expression, wrote 'The satanic verses' in 1989. Iran's religious leader Ayatollah Khomeini saw the book as an insult to Islam and subsequently pronounced a fatwā over Rushdie. Rushdie went into hiding for 10 years and still lives under permanent police surveillance.



Hanan Ashrawi (2011)

Dr Hanan Ashrawi is a human rights advocate and Palestinian politician. She is committed to the peaceful spread of democracy within the Palestinian Authority. She also wrote her memoirs in the renowned book 'This side of peace; a personal account' in 1995. "Freedom is all the more valuable to those who have experienced the lack of it" according to Ashrawi.



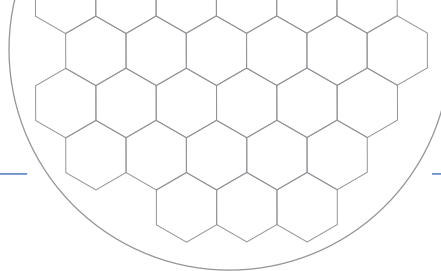
Frans de Waal (2012)

"The extent to which you are dependent on the will of another person has meaning" stated Ferry Breedveld when introducing behavioural biologist Prof. Frans de Waal. For example, De Waal linked morality to freedom and argued that morality is part of nature. De Waal's research on monkeys and elephants showed that animals not only show moral behaviour but also have empathy and a sense of justice.



Ban Ki-moon (2013)

Exactly 50 years after Martin Luther King Jr.'s famous speech, Ban Ki-moon, then Secretary-General of the United Nations, took stock. Where did freedom stand then and what was the road ahead? Ki-moon devoted his lecture to three pillars of freedom: freedom from want, freedom from the threat of war and the omnipresent nowadays making human rights.



Honoured laureates

Ewine van Dishoeck, winner of the Kavlip Prize for Astrophysics 2018, made her prize money partly available for the Young Star Award. This is awarded annually and is accompanied by a cash prize of € 2,500 for the winning student to develop further as a scientist.



Evening of Chemistry

The Royal Dutch Chemistry Association organises the Chemistry Evening annually. Part of the evening is the presentation of the talent awards.



Sustainable Innovation Award

Every year, Rabobank honours sustainable innovations and inventions with social relevance in various categories.

European podium for (young) talent

Providing a stage for talent. That is what we are aiming for with this bubble in 2022. Europe looks to Leiden. We would like to showcase the many (international) talents in the Dutch knowledge field at precisely this time. As a result, we warmly invite all knowledge institutions, professional and scientific associations and innovation-driven organisations to submit their award-winning talents for the European Wall of Talent (working title). Or to organise their award ceremony physically in Leiden, in the city that will then be brimming with science, knowledge and skill. Some examples and ideas...

[H] EuroScience Open Forum

Within the ESOF congress, there is full attention for (young) scientific talent. Even more than with previous editions, the aim of ESOF 2022 is to broaden the young target group among the conference participants. Parent organisation EuroScience presents the biennial EYRA award. This European Young Researchers Award has a PhD- and a Postdocs variant.

[H] Heineken Young Scientists Awards

A good example of a striking award within the objectives of Leiden 2022 is the Heineken Young Scientists Awards ceremony. Both in terms of content and momentum. With Heineken's establishment in the Leiden station area and the brewer's support already experienced at the time of the 2017 bid, this is worthy of enthusiastic exploration.

[H] EUCYS

From Leiden 2022 we are interested in hosting within the talent bubble EUCYS - the European Union Contest for Young Scientists. This originally Dutch competition attracts participants from more than 30 countries who compete against each other in a kind of XXL agora. Leiden is currently exploring the possibilities together with the European Commission.



The winners of the 2019 European Union Contest for Young Scientists in Sofia, Bulgaria.



Leiden winners of the 2019 Young Talent Award of the Royal Dutch Academy of Sciences.





Twenty Twenty Two

The year 2022 - or Twenty Twenty Two as we now affectionately call it - also marks milestones and knowledge-filled anniversaries. Because we are committed to generously celebrating knowledge with the Celebrate programme line, these moments are perfect for... cake! But above all for debate, reflection and a substantive look to the future. These activities are regularly combined with those in other tracks. Some special anniversaries are highlighted below.

5 Years of City Deal Introduction

After 5 years of City Deal Introduction we will take stock at the end of 2022. What fruits has the City Deal yielded in the various Dutch knowledge cities? Netwerk Kennissteden Nederland, one of the initiators of this City Deal, came into being in 2009. Affiliated are the cities and universities of Amsterdam, Delft, Eindhoven, Enschede and Groningen, Leiden, Maastricht, Nijmegen, Rotterdam, Tilburg, Utrecht and Wageningen, the Association of Universities in the Netherlands (VSNU), the Association of Universities of Applied Sciences and Kences, the sector organisation for student accommodation.

25 years Lorentz Centre

The Lorentz Centre - the internationally leading scientific workshop centre - celebrates its 25th anniversary in 2022 with an anniversary programme specially compiled for the occasion.



75 years ISO

The International Organization for Standardization exists 75 years in 2022. An appropriate moment to reflect on the functionality of standardisations, such as in science and healthcare. Over 165 countries are now connected through their national institutes. For the Netherlands, this is the NEN.

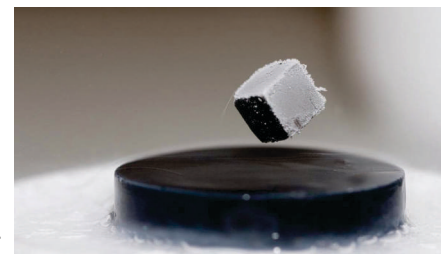


100 years of red pencil

On 16 March 2022, when the Netherlands goes to the polls and picks up the red pencil to vote for their favourite local councillor, something historic will be happening: the red pencil is celebrating its birthday. The symbol of democracy celebrates its 100th anniversary.

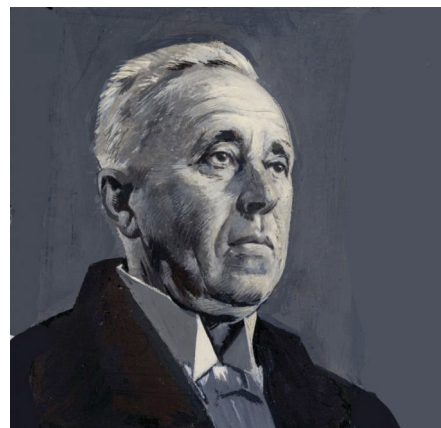
111 years of superconductivity

On 8 April 1911 - 111 years ago in 2022 - Heike Kamerlingh Onnes discovered superconductivity in his laboratory in Leiden. A few years later he received the Nobel Prize for his research into "the properties of matter at cold temperatures".



150 years Huizinga

Exactly on a rest day of the World Cup in Qatar, we celebrate the 150th birthday of Johan Huizinga. Many facets of Huizinga's life and work are discussed, including Homo Ludens - the playing man.



Round figures in 2022

- 5 Years of City Deal Introduction
- 10th edition EuroScience Open Forum
- 10 years of the Leiden Knowledge City Covenant
- 10 years UNICEF Chair in Children's Rights
- 10th edition Images in Leiden
- 10th edition Jan Wolkers Award
- 15 years Regional Knowledge Development Foundation
- 20 years LERU
- 20 years of the Euro
- 25 years Lorentz Centre
- 30 years Europaeum
- 30 years of the Maastricht Treaty
- 35 years Coimbra Group
- 40 years Rubik's Cube
- Last man on the moon 50 years ago
- 75 years ISO
- 100 years LAFV
- 100 years Hotz
- 100 years of red election pencil
- 150 years Johan Huizinga
- 300 years Paaseiland
- 447th Dies University Leiden

European university partnerships

As the oldest (research) university in the country, Leiden is no stranger to the European stage. It participates in various European cooperation frameworks and is often co-founder or initiator. A brief summary:

EUniWell

The latest addition is EUniWell - European University of Well-Being - a collaboration of seven European universities on the subject of well-being, recognised by the European Commission as European University.

LERU

The LERU - League of European Research Universities - now comprises 23 universities in 12 countries. In 2022, on 5 July to be precise, it will be 20 years since the LERU was founded in Leiden.

Europaemum

Another anniversary in 2022 of a slightly older date: Europaemum was founded in the Leiden sister city of Oxford in 1992. This consortium brings together 17 European universities around their passion for social sciences and humanities.

Coimbra Group

More extensive - the nestor in this list - is the Coimbra Group, which brings together 33 European universities. And there is also something to celebrate here: although the group was already informally founded in 1985, it was only officially ratified in 1987 - i.e. 35 years ago in 2022 - with the Coimbra Chart.

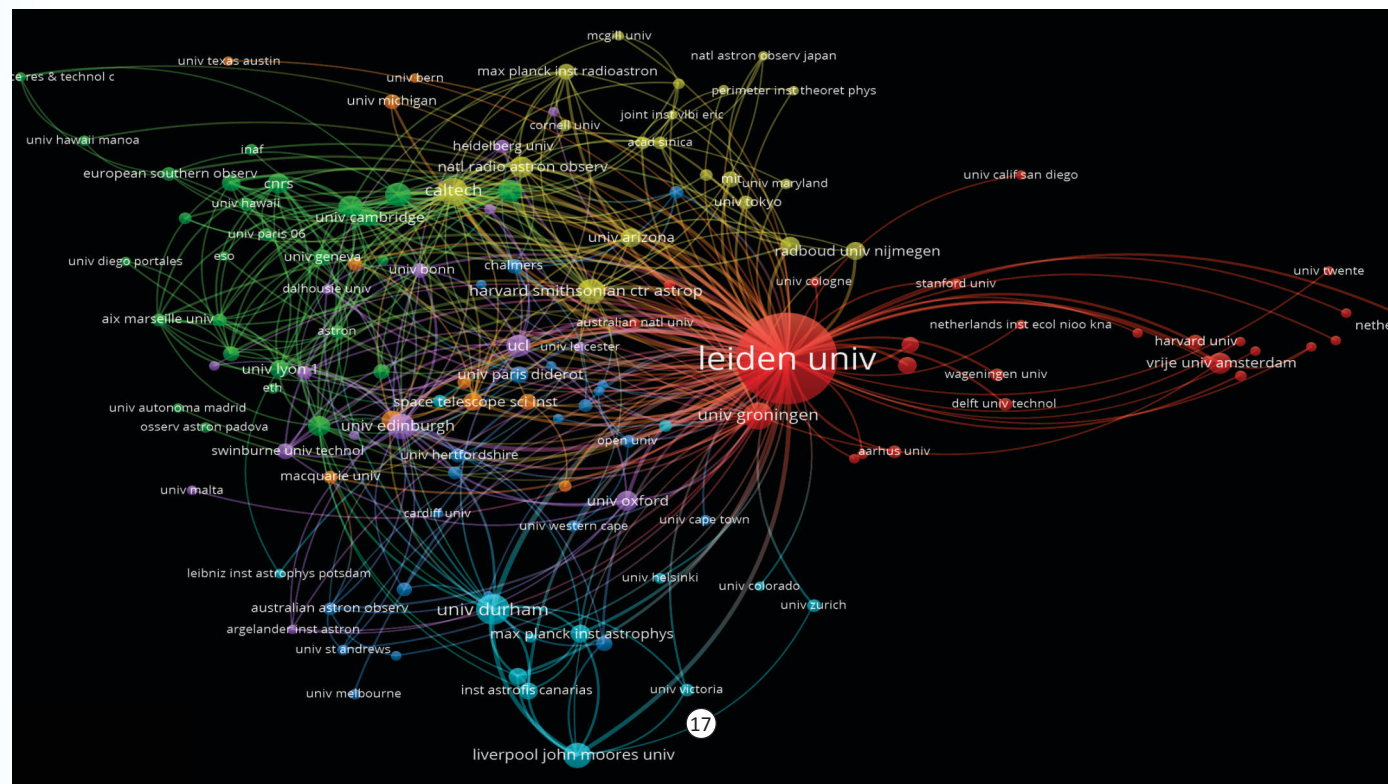
Internationaal verbonden

Leiden can rightly call itself an international knowledge city. All the ingredients are there and the university's fame and reputation are ahead of the troops. Perhaps the best proof of its international character is its enormous cross-border connection. Numerous connections run from all facets of Leiden's extensive knowledge ecosystem.

A striking example is Leiden Global. A meeting place where the partners of this initiative share with each other and the outside world their knowledge and connections concerning almost all continents: "We know about Africa, Asia & Oceania, Europe, Latin America & the Caribbean, the Middle East, North America, Russia & the Caucasus, and the Circumpolar Regions". Several leading museums and knowledge institutions are affiliated to Leiden Global, including the university with a number of its faculties. The initiative appeals to the imagination and deserves to be emulated.

That is why we have given the bubble that represents Leiden's extensive global connectivity the working title Leiden Global. Give a good example and the rest will follow. Within the annual programme, Leiden Global is the place where we uninhibitedly name and celebrate our share of knowledge in the world. This fits in perfectly with the rest of the annual programme, where the focus is on providing a European platform for the Dutch knowledge field.

Making international connections visible and tangible is important for the Leiden 2022 annual programme. Think of (ethnographic) exhibitions that are planned, the Japan Market of the SieboldHuis, the Middle East Culture Market of LUCIS or the twinning with Copernicus' Torun in Poland. Attention is also paid to the many networks in which Leiden has a seat or a share (see the columns) and the added value they bring to society. All this gives rise to the celebration of science, knowledge, art and skill.



European reference networks

The LUMC also has a strong European (and global) network in which it actively manifests itself. Just think of Regenerative Medicine (RegMed), where the LUMC has been pioneering for half a century and has strong international links (United States, Japan). In addition, LUMC also has an important or leading role to play based on its expertise in 8 of the 24 European reference networks, the ERNs.

Endo-ERN
endocrine disorders

ERN BOND
bone diseases

ERN EYE
eye diseases

ERN LUNG
lung diseases

ERN EURACAN
tumours in adults (solid cancers)

ERN EuroBloodNet
haematological diseases

ERN EURO-NMD
neuromuscular diseases

ERN-ReCONNET
connective tissue and musculoskeletal diseases

This Science Collaboration Map illustrates the high degree of international cooperation - in this case in the field of natural sciences in Leiden. The clusters around astronomy stand out in particular. This map was compiled in 2019 by Professor Ton van Raan as part of Leiden 2022.

[H] European Medicines Agency

A prominent newcomer is the European Medicines Agency, which has established itself pro-Brexit in Amsterdam in 2019. Leiden's knowledge partners, such as the municipality, the Leiden Bio Science Park and LUMC also contributed actively to the successful bid that preceded the arrival.



Knowledge Country, City of Knowledge: "We celebrate the newcomers!"

In 2022, Leiden will be the European stage for the entire Dutch knowledge field, of which Leiden itself is an important part. The bustling Dutch knowledge economy has many newcomers. In the bubble New Kids On The Block, we focus on the latest physical manifestations of science, knowledge, art and skill in the city and country. We reflect on their innovative contribution to society. Some examples of current and likely locations...



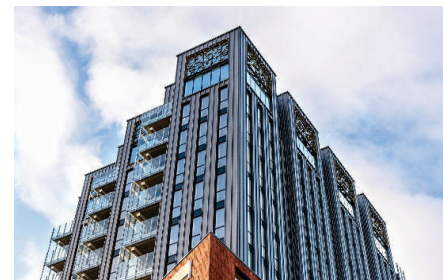
[H] Education: Atrium Hogeschool Leiden and LIS

The extension of Hogeschool Leiden - to be completed in the second half of 2022 - will provide a podium for the Practice-based Research Summit after its completion. The new building of the Leiden Instrumentation School (LIS) has already been realised and is also worth celebrating.



[H] Institutes: SRON and TNO

National knowledge institutes feel at home in Leiden. TNO recently expanded its presence and SRON - the Netherlands Institute for Space Research - will move in in 2021.



[H] Knowledge-intensive companies: Heineken, DuPont and Biopartner 5

The knowledge-intensive business sector is flourishing. This year, Heineken will open an Innovation Brew Pub, and Biopartner its incubator. DuPont recently preceded them.



[H] Art & Science: Einstein Fountain and completion of wall formulas

At the intersection of science and art, a number of striking new hotspots are planned for 2022. A fine example is the Einstein Fountain, a project by Professor Vincent Icke. And also the completion of the series of wall formulas; an initiative by Sense Jan van der Molen and Ivo van Vulpen, who recently NWO ENW Communication Award.



[H] Sapiens

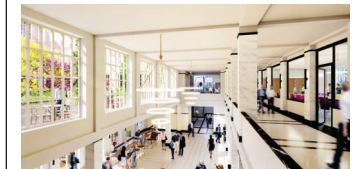
In 2022 at the Amsterdam Zuidas. A unique concept of Naturalis with elements of a museum, a laboratory, a workshop and a think tank focusing on the huge questions the climate crisis and the biodiversity crisis require.

[H] NL Space Campus

Significant steps are being made in the region with the development of the NL Space Campus in Noordwijk as the epicentre of the space cluster.

[H] Leiden Law Park

The plans for the Leiden Law Park are taking shape. A preview in 2022 is not inconceivable.



[H] Hof van Leiden

Leiden's renovated city hall will host gatherings around science, knowledge, arts and crafts.



[H] Campus square LBSP

The Campus square will be a green, inspiring meeting place for students, staff and residents of the city at Leiden Bio Science Park.



Tear-off calendar

The ultimate form in which we can help each person in his or her own neighbourhood want to achieve is the tear-off calendar. All 365 topics have their own day, and the paper calendar quickly brings you to the online environment with the current status of that day. We dream of distributing this tear-off calendar door-to-door in the 101 neighbourhoods which participate.

Daily radio show

365 topics of Knowledge through the Neighbourhoods also return every day in the radio show dedicated to Leiden 2022. With a look back on the previous day, podcasts for and by curious people, a look ahead to the coming days and everything else that is going on in the capital of science.



**Radio
Weetlust**

Sleutelstad

Knowledge in the heart of the city and region: 365 days in 101 neighbourhoods

In 2022, we want to enable everyone with a curious mind to ask questions and seek answers every day. So too in the Leiden region. With 'Knowledge through the Neighbourhoods' we will 'GET + BRING = SHARING' in 101 neighbourhoods. Every day we arouse curiosity and a lust for knowledge with a different low-threshold topic and then satisfy the resulting hunger for knowledge with answers to all the questions asked. And that makes everyone who participates a little wiser every day!

In this way, Leiden 2022 also shows what the added value of a knowledge city is for its residents and users, from young to old and without exceptions. Europe likes to see Leiden as a "generic role model for sustainable interactions between science and citizens." With the 'GET + BRING = SHARING' approach, we give substance to this in a unique and sustainable way. We like to set the tone for other European cities.

GET #durftevragen (#dare to ask)

Under the motto #durftevragen we give all inhabitants of the 101 neighbourhoods in Leiden, Leiderdorp, Oegstgeest, Voorschoten and Zoeterwoude the opportunity to ask their questions. We call on everyone to send their questions to **PO Box 71 during 2022**. With PO Box 71, we are creating a question centre for curious people. With a wink to mail for Father Christmas and mail for Boerhaave: both so famous that mail for them (sent from anywhere in Europe, even without an address) always reached the correct destination, respectively the North Pole and the Rapenburg. Anyone with a curious question can send it to PO Box 71 and can expect a (first) answer from the City of Discoveries by return mail. PO Box 71 is synonymous with knowledge city Leiden.

BRING #nieuwsgierig!? (#curious!?)

Every day, we bring to one of the 101 neighbourhoods a leitmotif for curiosity: the appealing low-threshold topic of the day. Some examples can be found on the right on this page. Which subject falls on which day and in which neighbourhood it is going to happen is announced in advance in the "Every day a bit wiser" tear-off calendar: the daily source of inspiration for inquisitive minds. We update all information from the tear-off calendar continuously on our website and also announce it in our daily Radio Weetlust broadcast.

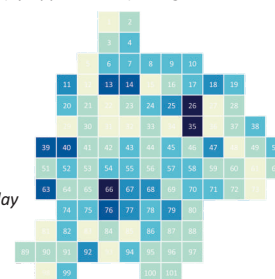
SHARING #deelgenoten (#participants)

Whoever follows one of these directions will arrive at a **special day meeting** on a topic that interests the curious at a suitable location in one of the 101 neighbourhoods. For example, the topic bat takes place in the neighbourhood with the most bat species and is set in the petting zoo in that neighbourhood. At the meeting, experts will interactively share their knowledge and expertise on the relevant topic. Generate curiosity and facilitating questions (not limited to the subject) are central to this. Questions raised during the meeting that cannot be answered immediately will be forwarded to PO Box 71 for answers. Also with **Radio Weetlust**, the radio show of Leiden 2022, the focus is on making participants. In the daily programme we look back (listen) at the previous day's meeting, give a preview - together with studio guests - of what is on the menu that day and look ahead to what is to come in the days ahead. And of course, in each broadcast we call on listeners to come up with questions about the upcoming topics and send them to PO Box 71. In this way, we make the question-and-answer carousel circular among all participants.



At the time of writing, just under 200 of the 365 days have been assigned a first subject. A sneak peek: haphazardly and in no particular order, a series of varied daily topics, each of which has already found its way onto the wall (see page 2). It is the ground coat. Therefore, an open invitation to come and stand in front of the wall (by appointment) and give feedback and input.

In abstract form, the 101 neighbourhoods in five municipalities (Leiden, Leiderdorp, Oegstgeest, Voorschoten and Zoeterwoude) that are central to the Knowledge through the Neighbourhoods bubble. Every day of the year, Leiden 2022 visits a different neighbourhood with its own curious topic. These subjects correspond to the low synapses (see page 7).



Gulliver's Travel Agency

The travel agency model has been experimented with before during the Night of Discoveries, where it was a resounding success and all the excursions were fully booked in no time. On this page, a number of examples in the offer on the shelves of Gulliver's Travel Agency.

Gulliver's voyages of discovery for curious people

In this cluster, one follows in the footsteps of the traveller Gulliver, whose daring adventures once began in Leiden¹. Throughout the year, this (online) travel agency offers walking, cycling and sailing tours that, under the guidance of scientists and experts, offer a true voyage of discovery through Leiden and the surrounding area. A few examples...



Through the mushroom Mecca with mycologist Jorinde Nuytinck



Mycologist Dr. Jorinde Nuytinck, associated with the Naturalis Biodiversity Centre has been unravelling the enormous wealth of species in the kingdom of fungi for more than 20 years. In this tour, she takes us to the 'Houten' of Leiden, such as the Leidse Hout and the forest park around the Oud Poelgeest castle, on a journey of wonder full of gnarled fluorescent mushrooms, edible or otherwise.

The magical underwater world of Leiden is full of surprises and a discovery in itself. On this evening tour with Aaf Verkade, expert in blue city nature, this beautiful underwater world is literally and figuratively put in the spotlight. Guaranteed catch: You will of course spot numerous species of fish, but also lobsters, crabs and even turtles between the corral and the bead.



Torch fishing in the Leiden canals and waterways



The tuber garden of Leiden aristocracy: the Rapenburg revisited



What do Boerhaave, Descartes, Von Sieboldt and Snouck Hurgronje have in common? They are all on a very long list of former residents of the Rapenburg. The special canal that was already known as the most beautiful in Europe in the 17th century is the focus of this historical walk. Behind every front door is at least one special story that has been brought back to life for the occasion. Rediscover the brainpower at the Rapenburg!

During this tour, we descend into the ancient cellars of Leiden under the guidance of archaeologists Jasper van Kouwen and Mette Langbroek of the Oudheidsfabriek. Once underground, the rich past and the archaeology of Leiden are told. Real archaeological finds are displayed and visitors are allowed to hold them. This way, everyone gets the chance to experience the past and to immerse themselves in old Leiden.



Leiden underground: archaeology in the cellar



¹Swift's Gulliver

This cluster honours the travel-loving adventurer Gulliver. Jonathan Swift, the spiritual father of Gulliver and contemporary of Boerhaave, had the adventures of his world-famous hero commence in Leiden. There, Gulliver would study medicine for two years and seven months and then embark as a ship's doctor. How he fared further was recorded by Swift in his now frequently filmed literary classic(s). His journey would take him to strange places and was peppered with encounters with eccentric scientists and their bizarre reasoning and absurd inventions.



Studium Generale

The university's Studium Generale is the main provider of public lectures in Leiden. Fully equipped to bring academic knowledge to a wider audience, to arouse greater interest in the sciences and to interpret the relationship between science and society.

Diverse assortment

An impression - far from complete - of public lectures and locations where these will be held. Top row: Scheltema lectures, PepTalks LUMC, Boerhaave Lectures, Leiden Global Lectures, Lorentz Centre lecture in RMO, Studium Generale in KOG. Bottom row: RAP lecture in Scheltema, Naturalis Live, association lecture in De Burcht, BplusC knowledge session in the OB, association lecture in Ins Blau, Academy building.

More than 200 public lectures in 2022

University city, student city, knowledge city... No matter how we describe Leiden, it exudes knowledge constantly. This is also reflected in the considerable amount of public lectures that are poured out over the audience every year. In a good year, this easily adds up to 200 fascinating lectures, something for everyone. Leiden 2022 brings all these lectures together in one programme.

Coherence and prior knowledge indicator

All these lectures are organised by a wide variety of knowledge institutions, study and student associations, science associations, faculties and museums. Each sender has its own target group and constituency, and its own entry level in terms of prior knowledge. It is an explicit wish that the Leiden 2022 programme should bring all this beauty of knowledge together. For example in the form of a complete annual guide with public lectures in which the organisers each gain attention and audience. An important part of the cooperation is the launch of a joint overarching "prior knowledge indicator" from which the interested public can judge how "tough" the lecture will be, in order to assess for whom this lecture is suitable. The classic layman's talk sometimes goes over even the layman's head.



Public lectures for anyone with a hunger for knowledge

Synergy with the 365 low-threshold topics

In coordination with the various organisers, we look to see to what extent the lectures tie in with the 365 day topics, so that they can strengthen the day's programmes. Vice versa, we also check whether organisers would like to see certain themes reflected in the 365 calendar. This can give rise to further development of a specific subject.

ESA astronaut André Kuipers, with two space journeys to his credit, has the attention of a full Leiden theatre with his lecture. On July 1, 2022, it will be exactly 10 years since he last stayed in space. Foto Monique Shaw.



a real-life testing ground

The economic partners in South Holland, including the province, the Economic Board Zuid-Holland, Innovation Quarter and Leiden Marketing have jointly developed the credo 'a real-life testing ground'. That stands for the innovative character of the region and its contribution to welfare and prosperity from that innovation. A region for smart minds and smart solutions.



TEDx

The motto "Ideas worth spreading" stems from the original TED Conferences. TED stands for technology, entertainment and design. Since its first conference in 1984, 'TEDTalks' has developed into the gold standard of knowledge sharing in its presentation format. In the context of Leiden 2022, Leiden Bio Science Park - the region's innovation district - is developing a series of TEDxLBSP sessions, both in physical form and in hybrid form.

Knowledge-intensive entrepreneurship: the cradle of innovation in the region

Science and innovation go hand in hand. And certainly in Zuid-Holland, where the ambition is to become a top region in the Next Economy. It is already the most knowledge-intensive region of the Netherlands, with its three top universities in Leiden, Delft and Rotterdam, several university medical centres and its various knowledge institutes. Two clusters immediately spring to mind: Life Sciences at Leiden Bio Science Park and the Dutch Space Cluster on the coast. With ESA-Estec as a landmark, about 80% of the space sector is located in Zuid-Holland. All in all, very fertile ground for knowledge-intensive entrepreneurship. And we would like to share that with Europe in this bubble in 2022.

Regional Community

There is a lot of infrastructure in the region aimed at the (starting) knowledge-intensive entrepreneur. Think of physical locations such as PLNT, ESA-BIC, Area071, Yes Delft! and PortXL. Page 18 also shows a number of newcomers, such as Biopartner 5 and the NL Space Campus. These initiatives support their participants with intensive programs and processes.

At the same time, this community-to-be is not always as strongly connected as it could be, let alone on a regional scale: the real modus operandi of the regional economy. With the prospect of Leiden European City of Science 2022, a number of parties have endorsed the idea of giving this community a face in the Leiden 2022 programme. Led by the Leiden Centre for Innovation and Entrepreneurship PLNT, which grew out of the Economie071 consortium, this league aims to offer appealing programming towards its own supporters and towards Europe.

[H] Square of Science

South Holland's Square of Science (Science²) presents itself as the central 'square' in the region where the regional knowledge-intensive ecosystem meets and displays itself to Europe. The Square of Science connects the supply in the region and maps the landscape of (starting) Science Based Entrepreneurs (SBE) in the province. The primary focus is on the Leiden region and the working areas of three economic boards: Leiden, Duin- & Bollen and Alphen aan den Rijn, in connection with other subregions such as Rotterdam-The Hague and Delft and bodies such as the Economic Board Zuid-Holland (EBZ).

Recent developments such as the Unlock programme - the incubation programme for Life Sciences & Health - fit seamlessly into this. PLNT is in the lead in the implementation of the Square of Science. PLNT is responsible for the Leiden region and involves relevant parties in the other two sub-areas.



In Ovo

A young Leiden company that is making waves in the world: In Ovo. And not without reason: through a technological innovation, it makes the unnecessary destruction of male day-old chicks in the industry redundant. It can already determine the gender in the egg. An ethical issue with a sustainable solution.



CHDR

The Centre for Human Drug Research (CHDR) is another fine example of knowledge-intensive entrepreneurship. The building designed as a test centre at the Leiden Bio Science Park fulfils an essential link in the development of medicines: the early-stage-clinical-trials phase, the phase in which medicines are tested on people.

Science is Wonderful!

Every year, the European Commission organises the European Research & Innovations Days. An event that attracts thousands of participants. Part of the R&I Days is the public exhibition Science is Wonderful! with which Europe shows how all investments in research and development find their way into applications for society. Leiden 2022 responds to this with this bubble



We Europe

From the beginning of the year, when the European Climate Walk visits Leiden, to the autumn during the European Researchers' Night: Europe meanders like a thread through the annual programme of 2022. In the heart of the year - around the ESOF Congress - a summer Science in the City science festival will take place for everyone with a curious nature. 2022 is also the year when we look back on 40 years of the Maastricht Treaty and ahead to Horizon Europe.



[H] European Climate Walk

A group of European scientists and artists has united under the name "Wanderers of Changing Worlds". With the Climate Walk project, they - while walking, observing, researching and creating - are drawing attention to climate change. The journey from north to south, from the northernmost tip of Norway to the southernmost tip of Portugal, will start in May 2021. NIt is expected that the walk will, at the end of January 2022, visit Leiden, as one of the two major stops in the Netherlands. In addition to Amsterdam, it will also visit Leiden, the capital of science. During their passage, the group gives workshops, engages in debates and works together with local communities of scientists and artists.

[H] European Science in the City Festival

It is a good practice that the cities hosting the ESOF Congress also commit to a festival for a wider and more general audience. This takes the form of a public knowledge and science festival in the summer. The European Science in the City Festival (ESiC) runs parallel to the congress. In cooperation with the European Commission, we are aiming for a European perspective on research and innovation by 2022, linking up with the Brussels programme Science is Wonderful! (a permanent part of the EU R&I Days, see left column). The value and impact of scientific applications in everyday life is of course part of the festival.

[H] European Researchers' Night

Every year on the last Friday of September, Europe celebrates and honours scientific research. Leiden will follow suit in both 2021 and 2022. In 2021, it will be part of the kick-off event of Leiden European City of Science 2022 held under the banner of Beyond Human (see page 6). It will again feature prominently in the 2022 annual programme. The Researchers' Night is part of the European Marie Skłodowska-Curie Programme and aims to give researchers the opportunity to present their research to a wide audience. In 2019, 433 cities in 27 countries participated. More than 1.6 million visitors took part and more than 36,000 researchers were involved.

[H] European Science Truck Festival

They are outstanding eye-catchers: Science Trucks. Many a school has had one visit and many a pupil has been able to marvel at and participate in the wonderful world of science and technology. In 2022, Leiden and its rich fairground tradition will be the playing field for a real science fair: the European Science Truck Festival. From all over Europe, the most unusual and bizarre laboratories, field labs, maker spaces and living labs on wheels come to Leiden. In French: 'Science Roulante! Once settled in Leiden, a pandemonium of scientific experiments unfolds before the public. It is not excluded that there is a stray grabbing machine among them, illustrating the meaning of probability.





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Who Knows