

# Cathedral Thinking : Cathedral Wealth

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We are entering an era of Cathedral Wealth, where the most meaningful thing that you can hand down to the next generation is no longer a watch or family estate, but a grand challenge, a life's work or a multi-generational task.



Timmerhuis, by OMA architects, Rotterdam. Photograph by Sebastian van Damme, Courtesy of OMA (In this report, we examine the ways that Cathedral Wealth and long termism are beginning to permeate our society in three pivotal ways.<sup>1</sup>)

In the Middle Ages, building a cathedral to honour God was considered one of the greatest works that a community could undertake. Everyone from the state and religious leaders to architects, craftsmen and labourers joined together to create these monumental structures.

Building a cathedral was an endeavour of such scale that they would often take decades or even centuries to finish. The people that laid the foundations would do so in the almost certain knowledge that they would never live to see the finished product.

Today, at a time when the future of mankind has never looked more complex and uncertain, we are increasingly realising that our biggest questions may require multi-generational answers.

'Modernity has pulled us into an era of short-termism and individualism,' says Rachel Armstrong, senior TED fellow and founder of Black Sky Thinking.

'However, the biggest issues facing humanity, such as climate change, over-population and energy and resource shortages, require us to think in terms of solutions that will span generations.'

Like the craftsmen that laid the first stones at St Paul's, St Basil's and Notre Dame, today's leading scientists, business leaders and creative innovators are beginning to think in terms of a new kind of wealth – the handing down of purposeful and life-affirming projects that only their grandchildren, or even great-grandchildren, will see bear fruit.

'In the past, your legacy would have been much more about handing down tangible assets, such as cash and bricks and mortar,' says Ken Forster, angel investor and managing director of Internet of Things solutions company Momenta Partners.

'Today, it's about a more organic, more sustainable wealth transfer – leaving your life's work, something you created, unfinished, and trusting those who follow you to see it through to completion.'

In this report, we examine how Cathedral Wealth and long-termism are beginning to emerge in society in three pivotal ways.

: **Creative Cathedrals** – the multi-generational projects that are shaping the future of science, technology and design

: **Commercial Cathedrals** – how the world of business is moving its sights from the next quarter to the next decade and even the next century

: **Cultural Cathedrals** – why our fascination with long-term cathedral wealth is driving the emergence of new forms of art and culture that will be enjoyed by future generations

: Creative Cathedrals



unfold by Ryoichi Kurokawa, at FACT, Liverpool, 2016. Photo by Brian Slater, courtesy of White Circle

Science, technology, and engineering are natural hotbeds of Cathedral Wealth. Consider how the technology used in smartphones has its roots in Einstein's quantum theory of light, which was developed in 1905.

Or how 3D printing is the culmination of generations of inherited engineering knowledge that stretches back to the invention of the spinning jenny in 1769.

Today, this in-built ability to plan across generations and centuries is proving to be a source of a form of wealth that will only pay dividends for people who have not yet been born.

'It has always been the job of scientists to think in terms of generations, to envisage where we might be in the years to come after we are gone,' says Monica Bello, head of arts at CERN, the research organisation behind the particle physics laboratory that has captured the imagination of the world.

According to Bello, the default position of many scientists is to accept that their work may not be instrumental in yielding results in their lifetime. 'For instance, many of my colleagues never thought that they would live to see evidence of the Higgs boson particle,' she says. 'For them, this is true aspiration and wealth.'

## Space travel

A desire to explore other planets and star systems has stirred the hearts and minds of many of the world's richest people. Elon Musk, the co-founder of PayPal and Tesla, plans to put people on Mars by 2026, and once quipped that he would 'like to die on Mars, just not on impact'.

Meanwhile, entrepreneur and founder of the Virgin Group Richard Branson aims to launch Virgin Galactic, the world's first commercial space line, in the future.

A cynic might dismiss these schemes as the pet projects of billionaires with legacy on their mind. But innovators such as Musk and Branson are democratizing the future of space travel, effectively taking mankind's future beyond the Earth out of the hands of governments and putting it into those of ordinary people.

The instigators of this particular Cathedral Wealth approach are opening up the possibility that any of us could become tomorrow's extra-planetary color allowing everyone to share in the dream of a future richness of experience and possibility that was previously the sole province of sci-fi writers and fans.

Deep Space Industries shares this particular long-term dream of shared future in space with a research and development push framed in decades rather than years. It aims to 'provide all the material and equipment needed to build cities in space' in the next 30 years, according to CEO Daniel Faber.

The 100 Year Starship project, a collaboration between the US Defense Advanced Research Projects Agency (DARPA) and NASA, takes the cathedral approach even further.

The project aims to make human travel beyond the known solar system a reality within the next 100 years – a considerable challenge when you consider the fact that Proxima Centauri, the closest star to Earth after the sun, is 4.22 light years (25 trillion miles) away.

'The concept of humans travelling to other star systems may appear fantastical, but no more so than the fantasy of reaching the moon was in the days of Wells,' reads the company's mission statement. 'His book *The First Men in the Moon* was published considerably less than 100 years before humans landed on the moon (1901 versus 1969), and the rapidity of scientific and technological advances was not nearly as great as it is today.'

## Trans-humanism

The science-based Cathedral Wealth project to beat all others is a multi-decade quest to hand down the ability to defeat death to those who follow after. Google's Calico project aims to 'hack the code of life' to control the aspects of human biology that cause the body to deteriorate.

Russian media mogul Dmitry Itskov is taking a more hardware-centric approach with his 2045 Initiative. His Avatar project aims to upload the consciousness of a human being to a non-biological carrier to enable a kind of cybernetic immortality.

According to Itskov, wealth is all about having the time to live out our aspirations. 'We will need 10,000 years to read all the books on Amazon.com, 1,000 years to fly to all the cities in the world, 2,000 years to learn the 6,000 languages of Earth, 250,000 years to master the 50,000 existing professions,' he says. 'Life is so short that we don't have the time to realise our plans and dreams, and we leave this world with regret. The present lifespan of 70–80 years is pitiful.'

As with the movement toward commercial space exploration, this quest for everlasting life can feel like the niche pet projects of the very rich, or the single-minded enthusiast, at this early stage.

But the same could have been said of the medical obsessions of Victorian philanthropists that led to the discoveries such as X-rays and antibiotics that revolutionised our entire way of life.

Similarly, the search for ultra-longevity by the wealthy few holds the potential to spill out into the mainstream over the next century, added to our collective societal wealth.

## Sustainability

Perhaps the most noble form of Cathedral Wealth thinking is the desire to hand down a safe and habitable planet to our children and grandchildren, and it is increasingly clear that there is no quick fix to the damage that has led experts to argue that a new era, the Anthropocene, should be formally announced.

'This is most definitely a cathedral project. It is a multi-generational task to undo what we have done to the Earth,' says Tim Kruger, James Martin fellow at the Oxford Geoengineering Programme.

In many ways, it is the shared image of our great-grandchildren standing in judgement of how we handled today's climate emergency that is driving a Cathedral reaction to many of our challenges.

'Today's generation may be the last one to have the ability to change the destiny of the way we view resources and the environment,' says Sarah Tulej, senior sustainability advisor at Forum for the Future. 'The huge question that is driving us towards accepting these cathedral challenges is: Do we want to be the generation who could have done something, but didn't?'

There is a growing recognition that ambitious sustainability projects are, by their very nature, Cathedral projects that need to reach beyond normal human time scales to deliver environmental wealth for the future.

Typical of this new breed is the Smithsonian Environmental Research Center's 100-year BiodiversiTREE project which aims to restore the naturally diverse forests along the coast of Chesapeake Bay, south of Washington DC, over the next century to create a biodiversity mix able to withstand the onslaught of climate change.

## : Commercial Cathedrals



Honda. Great Journey by Map and Morihiro Harano

From the global financial crisis to the wave of business giants that have failed to adapt to the digital era, the world of business is littered with cautionary about short-term thinking.

Driven by the cathedral thinking of the science and technology sectors, and the long-term strategies of brands such as Amazon, business leaders are increasingly moving away from their focus on quarterly results. They are beginning to envisage true success, and therefore wealth, as the creation of 1,000 year corporations that stand the test of time to provide economic stability, income and purpose for generations to come.

## Grand challenges

'The key in this short period we call a lifetime is to develop long-term strategies for business,' says Forster, whose business Momenta Partners was featured a Top 10 Infrastructure Investor in the Internet of Things by analytics firm Tracxn, and who embraces longevity, maintainability, transparency, evolvability scalability – the principles of long-termism in business as defined by Stewart Brand, writer and co-founder of the Long Now Foundation. 'I've always air to apply these to business.'

'However, there is still a lot of short-termism, especially in quarterly KPI reporting. The most inspirational leaders take a longer-term view and have a long term vision as well as a business plan based around short-term results.'

A new set of criteria is separating business leaders who have a long-term view from those who do not. Tugboat Institute is a membership organisation that brings together what it refers to as Evergreen CEOs.

It lists a set of characteristics that are present in an Evergreen entrepreneur, including prioritising purpose over profit, putting people first, having the discipline to focus on long-term strategy, balance short-term and long-term performance, and grow their business steadily and consistently from year to

## Uberlescence

The traditional model of mass consumption is being rethought as business leaders become more aware of the potential of ultra-long-term thinking.

'In lots of markets, that 'faster, cheaper, quicker' mentality is not the way to get people to buy products,' says Kate Cox, managing partner of strategy and ideas at Havas Media. In this emerging landscape, consumers are turning away from the cult of planned obsolescence.

Consider how US clothing company Flint and Tinder attracted more than £770,000 (€900,000, \$1m) in investment on Kickstarter after offering a 10-year guarantee on its 'built-for-life' hoodie. Or how The Saddleback Leather Company, which carries the slogan 'they'll fight over it when you're dead', offers 100-year warranty on its products.

Taking inspiration from the Centennial Light, the world's longest-lasting light bulb, which has been burning since 1901, designer Jake Dyson is similarly rejecting short-term strategies for building long-term wealth.

He has invented a light bulb that lasts for 180,000 hours (more than 40 years), even if it is used for 12 hours each day. Dyson rejects the idea that 'conventional consumer cycles or trends' should dictate how we create products. 'Designing a product that lasts for generations at peak performance and that requires no maintenance, service or replacement must be our long-term goal,' he says.

## : Cultural Cathedrals

Art, culture and commerce have walked hand-in-hand since the Renaissance. In an age where we are captivated by the promise of a shared social and cultural wealth born out of multi-generational scientific and business endeavours, the world of the arts is naturally mirroring society's growing fascination with Cathedral Wealth.

## P-art-icle physics



supersymmetry by COLLIDE Artist Ryoji Ikeda for ARTS AT CERN. Photo by Julian Calo

It is thanks to the ground-breaking nuclear physics laboratory CERN that we are able to trace at least part of the origin of today's marriage between scientific long-termism and an artistic fascination with the same principles.

Scientists at CERN are looking ahead to 2020 and beyond, when the Large Hadron Collider will require a major upgrade to increase the rate of collisions capable of producing by a factor of 10.

The laboratory has created Arts@CERN, an artist-in-residence programme that aims to fuse science and the arts, to translate this cathedral approach to the science of tomorrow into a language that can encourage the general public to engage in long-term thinking too.

The patrons list of the Arts@CERN programme reads like a who's who of modern cultural influencers, and includes Swiss architect Jacques Herzog, Japanese artist Mariko Mori, German photographer Andreas Gursky, British sculptor Antony Gormley, wildlife artist Frans Lanting and Swiss video artist Pipilotti Rist.

'With this new zeal for science and long-term projects, it is the job of art to capture this and translate it with relevance to society,' says Bello. 'There is the promise of finding something in nature, of unlocking the mysteries of life, which is very compelling. To create a work of art that lasts for generations, that is the ambition. When it comes to these cathedral projects, art is always going to be there. It's about staying where the relevant questions of our time are.'

## Delayed-release culture

Creating work that endures for generations is every great artist's dream. But a new generation of artists with a Cathedral Wealth mindset are creating work that will only be fully realised decades or even centuries from now.

The Future Library project is at the forefront of this thinking. In 2014, Scottish artist Katie Paterson began to plant a forest of 1,000 trees in Nordmarka, just outside Oslo, which will grow steadily towards maturity over the course of 100 years. Each year, one author is invited to contribute a story to The Future Library. In 2114, the trees will be cut down to make paper upon which these 100 stories from the past will be printed, published and read.

Booker Prize-winning author Margaret Atwood was the first writer to submit a story to the project, and British author David Mitchell has been announced as the second.

'100 years is not vast in cosmic terms,' says Paterson. 'It is beyond many of our current lifespans, but close enough for future readers to come face to face with it, to comprehend and compare.'

'It freaks me out a bit when I think that many of these writers aren't even born yet. Sometimes it does hit me – if I live to 90, what will it be like then? It's very exciting as an artist.'



Century Camera by Jonathon Keats

A similar approach is being used in photography. Artist Jonathon Keats' Century Camera project plays with the idea of a long-term capture of a single image. One hundred cameras have been set up around Berlin that will take 100-year-long exposures. The Arizona State University Art Museum will unveil finished images in a month-long exhibition that is scheduled for 2115.

## Conclusion

There is a common thread that ties together the various incarnations of cathedral thinking that are evolving across science, commerce and the arts, which in turn reshaping how we define wealth.

The handing down of cash and assets to future generations has been the main way that we have passed down our material values to those who come after us.

But a cathedral project that is passed, still unfinished, from our hands into those of our children and grandchildren, harks back to an older understanding of wealth – the idea that it is our duty to leave a sense of purpose and a shared mission that is at the very heart of the story that humans tell each other about our reason for being here.