Concrete stories
How it all began – The story of Graphic Concrete

My interest in concrete as a building material began as a student at the Helsinki University of Art and Design. In 1996 I enrolled in a course on concrete applications to learn more about the material. The aim of the course was to examine new look of concrete, and the outcome was a design for the Pikku Huopalahti Concrete Park. I studied aesthetic values of concrete as a facade material and how to treat the concrete surface in an industrially viable way. This resulted in a new method of creating patterned concrete surfaces, graphic concrete, which was the subject of my final thesis.

The real challenge was to apply this technology to precast concrete production. The final method, patented in February 1999 as Graphic Concrete, became the auxiliary trade name of my design company, Receptar Ltd. In 2000 we launched a product development project together with leading concrete factories, paper manufacturers and printing laboratories. The project was financed by Finnish concrete companies and the Finnish Funding Agency for Technology and Innovation (Tekes).

The R&D project was a success, and in 2002 together with Veli-Pekka Rydenfelt, Engineer, and Risto Mannonen, D. Tech, we founded the company called Graphic Concrete Ltd. Later, Graphic Concrete Ltd. announced the appointment of its first Managing Director, Harri Lanning, D. Tech, to oversee the commercialisation of the technology. Today, the technology holds a patent in EU, USA, Canada, South-Korea, China, Brazil and South Africa.

Samuli Naamanka, Interior Architect, MA
Making a concrete impression

The company
Graphic Concrete is a proprietary technology that enables the reproduction of attractive and durable patterns and images on prefabricated concrete surfaces such as façades, partitions, walls, floors, and pavement slabs. It provides both timeless and visually aesthetic details that enhance the architectural appearance of the building.

From the beginning, graphic concrete technology was developed as a tool for architects and designers. With this tool they could integrate their visual creativity into construction projects and design large-scale concrete surfaces. All building parts prefabricated by means of horizontal casting are suitable applications.

Today, graphic concrete is a proven concept within the prefabrication concrete industry. Since our foundation in 2002, Graphic Concrete solutions have been used globally in over 600 projects throughout 25 countries. Our list of international projects demonstrates the vast range of designs in which architects can use graphic concrete: whether the project is public, residential, commercial, industrial or infrastructural in nature.

Using Graphic Concrete, architects and designers are able to turn their visions into impressive buildings and structures. Our products can be tailored, and the outcome of each project is unique.

Our technology
Our solution is to print the desired image on the membrane, which is then sent to the local concrete prefabrication company for casting. When the concrete has set, the membrane is removed and the panel surface is washed to reveal the aggregates in the concrete. The image results from the contrast between the fair face and the exposed aggregate surface. Read more about the production from page 78.

Easy, safe, and cost effective solution
Creating excellence in architecture does not have to be expensive. Our solution is cost effective as the surface is manufactured ready for installation, and as such requires no additional cladding. Maintenance-free façades are especially important on tall structures, in terms of safety and overall costs.
Creating concrete stories

This book includes a small sample of our references, each one better than the next and each with their own story to tell. Graphic concrete has played an important role in the interpretation of all these stories. Small excerpts from these stories can be read on the following pages. You can read the entire story behind each project on our website at: www.graphicconcrete.com/stories

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Semba Center Building
Osaka, Japan, 2014

Architecture: Ishimoto Architectural & Engineering Firm Inc.
Graphics: Samuli Naamanka
Builder: Kumagai Gumi Co., Ltd.
Prefabrication: Asahi Building-Wall Co., Ltd. (AGB)
Pattern: Unique repeating pattern

“The design assignment for a Kimono pattern was an extremely interesting challenge, as the kimono is a very traditional Japanese garment. In my subsequent research I learned about kimonos and their different varieties, such as Nami and Asanoha kimonos. I found out that each designer creates his or her own variation of the theme and that there is no one standard design,” Samuli Naamanka, Interior Architect, MA

Photos
Graphic Concrete Ltd
Keiyo Bank
Chiba, Japan, 2014

General Contractor:  Keisei Construction, Inc.
Prefabrication: Takahashi Curtain Wall Corporation
Pattern: Unique repeating pattern

Photos
Katsuhiko Suzuki

© graphic concrete®
Skandion Clinic
Uppsala, Sweden, 2014

Architecture: Link Arkitektur Stockholm
Builder: Akademiska Hus Uppsala Ab
Prefabrication: Abetong AB
Pattern: Unique repeating pattern

“The white colour and the graphic pattern are common to the various building volumes. We have tried to achieve a ‘textile’ effect with the pattern to give the large volumes a human appearance. Many who work or have visited the building have speculated about what the pattern actually illustrates. The hotel’s staff likens it to a lace curtain, while the clinic’s staff sees it as a rain of protons.”
Carl-Fredrik Danielson, Architect SAR/MSA, Link Arkitektur.

Photos
Mervi Junkkonen
Attunda Tingsrätt, Courthouse
Sollentuna, Stockholm, 2010

Architecture: Svante Forsström Arkitekter AB
Pattern: GCCollection™ Round rough
Developer: Skanska

The pattern adds an interesting new aspect, tactility, to the façade. When viewed up close, the pattern appears clearly dotted. From further away, the pattern is almost invisible still creating depth to an otherwise simple facade.

Photos
Graphic Concrete Ltd
Waurn Ponds Police Station
Victoria, Australia, 2014

Architecture: Strata PNA Architects
Builder: Lyons Constructions
Prefabrication: Metro Precast
Pattern: Unique image

Photos
Reid Construction Systems

© graphic concrete®
Saint Vincent de Paul Church
Rezé, France, 2014

Architecture: Magnum Architect and Urbanist
Design/Graphics: Bertrand Aubry
Prefabrication: Naullet
Pattern: Unique repeating pattern

The delicate lines, revealed to be words when studied closer, represent the words of Saint Vincent de Paul and verses of the Bible. These texts reflect the purpose of the building as a place of worship.

Photos
Stéphane Chalmeau
Viborg Landsarkiv, Provincial Archive
Viborg, Denmark, 2015

Architecture: Schmidt Hammer Lassen Architects
Design/Graphics: Goethe Sørensen, Textile Designer
Builder: KPC BYG A/S
Prefabrication: Confac A/S
Pattern: unique repeating pattern

Photos
Helene Hoyer Mikkelsen

© graphic concrete°
Hämeenlinna Provincial Archive
Hämeenlinna, Finland, 2009

Architecture: Heikkinen-Komonen Architects
Design/ Graphics: Aimo Katajamäki, Aimononia
Builder: Senate Properties Ltd.
Prefabrication: Parma Oy
Pattern: Unique repeating pattern

“We decided to coat the facades of the archive with graffiti. This black national memory stick is embroidered with tags found in the depths of the archive: from peasants’ bookmarks and the letters of kings to contemporary internet symbols. This was made possible by the graphic concrete technology.”

Mikko Heikkinen, Architect, Heikkinen-Komonen Architects

Photos
Graphic Concrete Ltd
Jussi Tisnen
Skanska Headquarters Finland
Helsinki, Finland, 2011

Architecture: L Architects (Larkas & Laine Oy)
Prefabrication: Ämmän Betoni Oy
Pattern: Unique repeating pattern

“The inspiration for this particular pattern was the historic “Nolli Map of Rome” drawn in the 1700s. From afar the pattern looks like natural rock, but up close it reveals an old city map. Observed in detail one can even make out the street names, courtyards and churches. But in reality you cannot find this city anywhere, as the map has been drawn on top of the image of an oak leaf; the leaf stems are transformed into streets and the spaces in between become city blocks and buildings.” Katia Salo, Architect, L Architects

Photos
Tiia Ettala
Graphic Concrete Ltd
Derby Business Park
Espoo, Finland, 2011

Architecture: Lahdelma & Mahlamäki Architects
Builder: SRV
Prefabrication: MH Betoni Oy
Pattern: Unique repeating pattern

Photos
Graphic Concrete Ltd
Valio Lapinlahti Factory Building
Lapinlahti, Finland, 2012

Architecture: RE-Design Ltd.
Graphics: Pauno Pohjalainen
Prefabrication: Lujabetoni Ltd.
Developer: Valio Ltd.
Pattern: Unique repeating pattern and unique design

“The design of this pattern was based on the factory’s purpose: processing milk into powdered milk. It was inspired by telling my own children about the nutritional importance of powdered milk. An angel appears in the design: ‘the angel about the sky of Lapinlahti’. It symbolises how everything good comes to us as a gift from heaven.”
Pauno Pohjalainen, graphic designer

Photos
Kuvatoimisto Kuvio
H.A.N.S. Industrial Building
Čeperka, Czech Republic, 2009

Architecture: Ing. arch. Jan Jarolímek
Pattern: GCCollection™ Atom Cross
Developer: H.A.N.S. stavby, a.s.
Prefabrication: H.A.N.S. stavby, a.s.

Photo
Ing. arch. Jan Jarolímek
Aleš Jungmann MgA., QEP
Forskerparken Cortex
Odense, Denmark, 2015

Architecture: Creo Arkitekter A/S
Builder: CJ Anlæg A/S
Prefabrication: DS Elcobyg A/S
Pattern: GCCollection™ Ikat, Piksel, Round Rough 200%, Textilia 200%

Photos
Helene Hayer Mikkelson

© graphic concrete®
Crevin Upper Secondary School
Crevin, France, 2014

Architecture: Jean-Francois Golhen Architecte
Builder: Département Ile et Vilaine
Prefabrication: MSA
Pattern: Unique image

The façade depicts 28 iconic persons who have had their influence in the cultural development of Bretagne, including the author Colette, the artist Clotilde Vautier, the film director Charles Vanel and the poet Gilles Fournel.

Photos
Graphic Concrete Ltd
Josep Quinovart Primary School
Castelldefels, Spain, 2011

Architecture: Pich-Aguilera Architects
Prefabrication: Hormigones Prefabricados de Espana S.L.U
Pattern: Unique repeating pattern

“The building is a school, a primary school where children start to learn about what numbers are and what they mean in our world. You can deal with numbers nearly every day; you have to calculate, remember the telephone number of your friends and family, computer language is based on numbers. You find them everywhere: mathematics, physics, and so on. We want to show that they are not only scientific; numbers can be decorative, and they can be art. It always depends on one’s personal point of view. Ute Müncheberg, Architect, Pich-Aguilera Architects

Photo
Graphic Concrete Ltd
Ulappatori, Housing
Espoo, Finland, 2012

Architecture: Petri Rouhiainen Architects Ltd.
Design/Graphics: Aimo Katajamäki, Aimononia
Builder: YIT Construction Ltd.
Prefabrication: Parma Oy
Pattern: Unique repeating pattern

“The inspiration for the patterns came from the site’s proximity to the sea. The repeating patterns feature fish and shellfish from the Baltic Sea, and their scale is close to their natural size. These patterns are complemented by abstract lines resembling sea waves flowing across the façade.”

Aimo Katajamäki, Graphic Designer, Aimononia

Photos
Kuvatoimisto Kuvio Oy
Zwembadsite, Housing
Leuven, Belgium, 2008

Architecture: Bob361 architects
Design/Graphics: Bob361 architects
Developer: Implant nv, Extensa nv
Prefabrication: Eurobeton
Pattern: Unique repeating pattern

“The design completes Smets Square and its residual spaces, while creating new passages, integrating the existing Fabiola building, and enclosing a new informal semi-public/semi-private courtyard. The apartment building acts as an intermediate zone between two different scale levels, and each building block is finalised by taking its own logic into account.” Bob361 architects

Photos
Graphic Concrete Ltd
Les Marguerites, Housing
Paris, France, 2012

Architecture: Agence Espaces Libres
   et Agence SkyLines Architecture et Urbanisme
Design/Graphics: Marie-Gabrielle Verdoni
Prefabrication: Decomo SA
Pattern: Unique repeating pattern

Discrete white flowers connect the building with its facing green area, delivering an optimistic message to pedestrians. As the morning hits the surface, the whole façade starts to bloom.

Photos
Thierry Truck
Länsisatamankatu 23, Housing
Helsinki, Finland, 2013

Architecture: Huttunen Lipasti Pakkanen Ltd.
Builder: NCC Construction Ltd., Helsinki Housing Office
Prefabrication: Ämmän Betoni Oy
Pattern: GCSmooth™

The beautiful velvety smooth and even concrete surface highlights the inherent beauty of concrete.
**Joensuu Eli, Housing**  
Joensuu, Finland, 2010

Architecture: Arcadia Oy Arkkitehtitoimisto  
Graphics: Maria Mughal, Woop  
Builder: Student Housing Joensuun Eli Ltd.  
Prefabrication: Pielisen Betoni Oy Lieksa  
Pattern: Unique image

The facades of the building feature an impressive work of art realised in graphic concrete. Entitled “Sisters”, the design is based on three paintings by artist Maria Mughal: “Poem”, “Nature” and “Helen of Troy”. Mughal’s original inspiration for the series of works was based on concrete as a material – often considered gray and cold, even impersonal. The works of art on the end facades of the complex are the very opposite – colourful and large 3 x 3.8-metre paintings. The artist wanted the female figures of the paintings to make direct contact with viewers.

Photos  
Graphic Concrete Ltd
Kuopion Majakka, Housing
Kuopio, Finland, 2014

Architecture: QVIM Arkkitehdit Oy
Prefabrication: Ämmän Betoni Oy
Builder: Lujatalo Oy
Pattern: GCCollection™ Ikat nega

Photos
Kuvatoimisto Kuvio
“By applying graphics to the facade it can deliver a message. Primula is the developer for the Kvarteret Mältaren project in the new seaside area of Stockholm, Hammarby Sjöstad. For this building artwork was implemented on the facades. The artwork tells a story with real life situations, and the story is told by figures in pictogram form using graphic concrete. This adds to the street level excitement – giving a new dimension to the architecture and a visual experience for visitors.” Torleif Falk, Project developer, Architect SAR-MSA, Primula

KV Mältaren, Frieze
Hammarbysjöstad, Sweden, 2010

Architecture: Primula
Artistic co-operation: Torleif Falk, architect, Primula
Design/Graphics: Lars Arrhenius
Developer: Primula Byggnads AB
Pattern: Unique image

Photo
Graphic Concrete Ltd
Helsingin Tervapääskynen, Housing
Helsinki, Finland, 2011

Architecture: Arkkitehtitoimisto Helamaa ja Pulkkinen Oy
Graphics/Photographer: Tapio Vanhatalo
Builder: VVO Rakennuttaja Oy
Prefabrication: Parma Oy Forssan tehdas
Pattern: Unique repeating pattern

The gentle look of a group of cows in a newspaper picture caught the attention of the architect, whose task was to reflect the history of the area of a new residential building. He resolutely wanted to use this specific picture on the cold retaining wall as the building stands on the same spot as veterinary stables some centuries ago.

Photos
Graphic Concrete Ltd
Ospedale Giovanni XXIII Chapel
Bergamo, Italy, 2012

Architecture: Traversi + Traversi Architetti and Aymeric Zublena
Graphics: Stefano Arienti
Builder: Styl-Comp Group
Prefabrication: Styl-Comp Group
Pattern: Unique image

“The inspiration came from the Garden of Eden, as reflected by the flowers, plants and shrubs that are repeated in the pattern. The floral imagery was realised using delicate rasterised images and a dedicated concrete mix design, creating an overall impression that is light, airy and calm. The natural light that enters the chapel through round openings in the walls and in the ceiling completes the breathtakingly beautiful effect.”
Ivo Alias, Design Director, Styl-Comp Group

Photos
Camillo Bonfanti, Styl-Comp Group
Graphic Concrete Ltd
Fortaleza Hall honors the family history of SC Johnson and celebrates the spirit of adventure. The curved graphic concrete interior walls add visual effect to the overall experience.
“The first Swedish national archive regulations dating back to the 17th century have formed the pattern on the wall in front of the grand lecture hall. The ‘spectators’ came from my notes from one of the many meetings concerning how to decorate the wall. Sometimes notes can be useful…”

Nils P. Johansson, Architect, Tage Möller Arkitektbyrå AB

Archive Center Lund
Lund, Sweden, 2012

Architecture: Tage Möller Arkitektbyrå AB
Prefabrication: Strängbetong AB Herrljunga
Pattern: Unique image

Photos
Graphic Concrete Ltd
Jyväskylä Adult Education Institute
Jyväskylä, Finland, 2014

Architecture: Arkkitehtitoimisto Pekka Paavola Oy
Prefabrication: MH Betoni Oy
Pattern: Unique repeating pattern

“We wanted to use an image or pattern on the wall of the hall to communicate its purpose: carpentry. The pattern had to be easily repeatable and graphic in appearance. We believe that the pattern illustrating plank ends did an excellent job of meeting our needs.”

Niina Murtola, Architect, Arkkitehtitoimisto Pekka Paavola Oy

Photos
Kuvatoimisto Kuvio
Tändstickan Parking House
Göteborg, Sweden, 2013

Architecture: Arkitektbyrå Design AB, Göteborg
Graphics: Arkitektbyrå Design AB, Göteborg
Builder: Skanska Stomsystem AB Distrikt Väst/Syd
Prefabrication: Kynningsrud Prefab Ab
Pattern: Unique repeating pattern

“The idea to use graphic concrete came from the insight that the parking garage is huge and we need to bring down the scale using a graphic pattern. The primary aim was that the persons working in surrounding buildings should have a nice view despite the massive concrete parking house. The nature pattern is used to highlight the contrast between cars/traffic/pollution and nature/animals/fresh air. We wanted a calm and playful feeling.”

Henrik Markhede, Architect SAR/MSA, Arkitektbyrå Design

Photos
Graphic Concrete Ltd
Anne-Charlotte Brettmark

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Leppäviita Parking House
Espoo, Finland, 2013

Architecture: Arkkitehtityö Boman, Lindström, Vesanen, Virtanen Oy
Builder: ISS Proko Oy
Prefabrication: Lujabetoni Oy
Pattern: GCCollection™ Vertices nega

Photos
Graphic Concrete Ltd
Graphic Concrete Pavilion
Milan, Italy, 2012

Architecture: Rintala Eggertsson Architects
Graphics: Samuli Naamanka
Prefabrication: Truzzi Prefabbricati
Pattern: Unique image

Photo
Graphic Concrete Ltd
Skanska Headquarters Sweden
Stockholm, Sweden, 2013

Architecture: Strategisk Arkitektur
Builder: Skanska Stomsystem AB
Prefabrication: Skanska Stomsystem AB
Pattern: Unique repeating pattern

Photos
Graphic Concrete Ltd
The floor is made of large concrete slabs that create the impression of a rug, one that is full of shapes and repeating patterns. While the larger patterns can be discerned immediately, the smaller ones require closer examination. As a growing number of residents in nursing homes suffer from some form of dementia, the patterns serve as elements that help stimulate their mind, evoking associations and memories of the past. The concrete “rug” conceals everyday objects and evocative shapes in the form of repeating patterns. One can find dogs, cats, buckets, spades, caravans, cars, tractors, flowers and leaves in the patterns. Together they help make the entrance cosy and interesting.”

Trude Mardal, Architect MAA, Entasis

Photos
Graphic Concrete Ltd
Viertola Wall
Vantaa, Finland, 2014

Architecture: Jaakkola Architects Ltd.
Builder: Lemminkäinen
Prefabrication: Lahden Kestobetoni Oy
Pattern: GCCollection™ Swarm nega

Photos
Graphic Concrete Ltd
Kockums Park
Malmö, Sweden, 2010

Architecture: White Arkitekter AB Malmö
Builder: Midroc Property Development AB
Prefabrication: S:t Eriks Uppsala
Pattern: Unique repeating pattern

“We were inspired by the history of the site. Kockums AB was a Swedish shipyard and we focused on the workers, the so-called ‘kockumiterna’. We wanted to show their everyday lives balancing on high scaffolding surrounding the ship.”

Nina Lindegaard, Landscape Architect MSA

Photos
Graphic Concrete Ltd
Pihlajalaakso Sound Barrier
Kuopio, Finland, 2014

Architecture: Ramboll Finland Oy
Graphics: Teemu Matilainen / Ramboll Finland Oy and Graphic Concrete
Builder: City of Kuopio
Prefabrication: Betonimestarit Oy
Pattern: Unique repeating pattern

Photos
Kuvatoimisto Kuvio
A vibrating table removes air from the concrete. The next day, the element is demoulded.

The element is transported to the washing area and the membrane comes off.

The element is high pressure washed.

The element dries and waits to be transported to the building site.

The casting is prepared by cleaning the mould and cutting the membrane according to the element drawings. It is recommendable to use a vacuum table.

The membrane is spread out on the clean mould table with the retarded side facing the concrete.

The reinforcement is placed on the membrane. The casting starts.

The mould is filled with concrete mass.

A vibrating table removes air from the concrete. The next day, the element is demoulded.
Now it's your turn to write your own story!

Don’t hesitate to contact us – we’re always happy to help!

Graphic Concrete Ltd