



LH ACCELERATOR SEASON#2

Building innovation together

May 2019

AMBITION : BUILDING INNOVATION TOGETHER

Led by LafargeHolcim with CCCC and SIKA, **LH ACCELERATOR** offers a unique acceleration program giving access to a high level technical & market expertise along the construction value chain on a global scale.



CORPORATE PARTNERS



LafargeHolcim

The leading global construction materials and solutions company serving masons, builders, architects and engineers all over the world.

- ☐ Sales 2018 : €24.2B
- ☐ 75 000 employees
- ☐ 80 countries



CCCC is a Chinese construction company engaged in design and construction of transportation infrastructure, dredging and heavy machinery manufacturing business.

- ☐ Sales 2017 : €61,6B
- ☐ 112,719 employees



BUILDING TRUST

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector & motor vehicle industry.

- ☐ Sales 2018 : €6.2B
- ☐ 20 060 employees
- ☐ 101 countries

A 6 MONTHS PROGRAM

An intensive acceleration program with a powerful mix of entrepreneurial, business and technical expertise.



A unique access to Lafargeholcim R&D Center (Lyon, France) and country specific resources from Lafargeholcim and partners

OUR OFFER

TECHNICAL



- ✓ **State of art technical infrastructure**
Access to the R&D facilities of LafargeHolcim and corporate partners
- ✓ **Technical coaching**
100 hours to design prototypes, test and develop products and get feedback

BUSINESS



- ✓ **Business opportunities**
Opportunity to collaborate with the selected country teams and become supplier, partner, or obtain licensing agreement
- ✓ **High level Mentoring**
Paired with a top manager from LafargeHolcim to facilitate access to the Group and its resources.
- ✓ **No Equity taken**

SEASON 1 2018

+ 300 applications

10 companies
selected from 5 countries

6 partnerships considered
following the program



CASE STUDY - 2018

CARBON CURE : CO2 Utilization to Unlock New Concrete Profits and Sustainability.

FOCUS DURING THE PROGRAM

Developing a solution for the carbonation of Concrete wash water

- ✓ Enhance concrete sustainability by sequestering more CO2 & reducing fresh water consumption and reusing waste.
- ✓ Create an new economic value by cement reduction, water recovery, regulatory & disposal cost avoidance.
- ✓ Reinforce the Cement CO2 Capture & Reuse model

ACHIEVEMENT

Testing the value provided by their solution at LCR and improving the business model with LH and SIKKA business experts

NEXT STEP

The promising results from the testing leads to a will to develop an industrial pilot on a plant in France



#SEASON 2 CHALLENGES AREAS

LH Accelerator Season 2 seeks for innovative companies that can help lead the transformation of the construction industry and solve **the following challenges.**



CONCRETE 2.0

Enhance the properties of cement-based materials beyond the core value of structural integrity

Weight reduction, noise reduction, light reflectivity/translucency, thermal properties, porosity, environmental footprint



CONSTRUCTION WASTE

Rethink the design and process of making and delivery cement and concrete for avoiding, minimizing, reusing the waste from quarries to building sites. Propose alternative to tackle resource scarcity.

Feedstock materials, water, energy and product waste, modularity



REAL TIME QUALITY CONTROL

Monitor, test, evaluate and adjust the quality of materials across the supply chain: from raw materials to product delivery

Sensors from raw materials to product delivery or truck sensors to monitor workability, air, water and make automated adjustments

#SEASON 2 CHALLENGES AREAS



CO2 NEUTRALITY

Use new construction materials and/or measure, track and develop options to move towards neutrality

Alternative raw materials, industrial by-products, sensors, analytics, software models and process



REAL TIME PRODUCT DEMAND FORECAST AT SITE

Develop and apply accurate, real time prediction of demand for product quantities and types by job site

Data collection, processing and input across the value chain



MONITOR PERFORMANCE

Monitor performance characteristics of concrete delivery at construction sites and in prefabrication

Sensors about temperature, humidity, pH, structural resilience, durability

#SEASON 2 CHALLENGES AREAS



AUTOMATION

Increase use of automation to infrastructure (e.g. ports) and to related construction projects as painting

I.O.T , 5G, digital solution, 3D printing solutions, robots and other technologies



INFRASTRUCTURE & BUILDINGS

Develop and use software models / digitalized visualization of the construction phases in infrastructure (such as roads and bridge) and building projects.

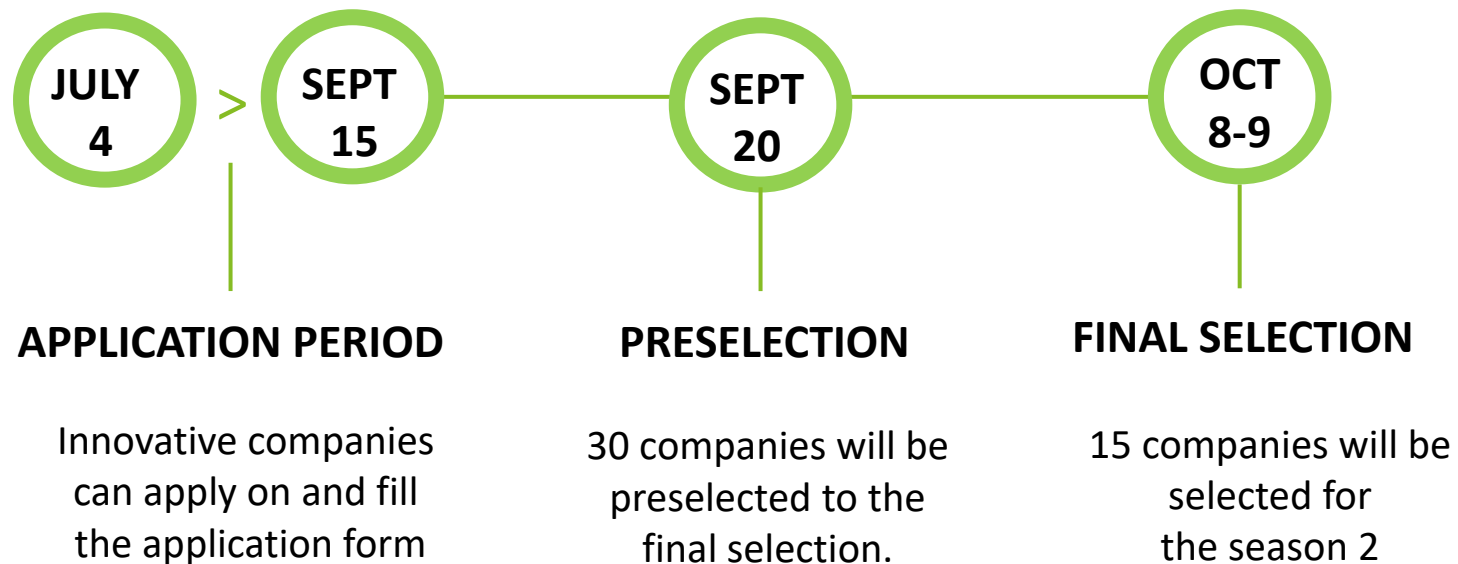
Machine learning systems, predictive maintenance, IA, etc

ACCELERATION TIMELINE

A program organized around **2 on-site events** in LafargeHolcim R&D Center Lyon, France



KEY DATES



APPLY before SEPT 15th !

www.lh-accelerator.org

More information?

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**OPERATING
TEAM**



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