# Leica iCON build

## Custom-built Solutions for Building Construction

New Features

PART OF HEXAGON

- when it has to be **right**

Leica Geosystems

# Leica Geosystems intelligent CONstruction
## Enhancing your performance

**Fully understanding construction carried us beyond the ordinary. Leica iCON is more than a new product line and a software package, it enables you to enhance your performance and increase your profitability through perfecting your construction workflow.**

### iCONstruct

Tailor-made hardware and software solutions for positioning and measuring tasks on site.

- Custom-built
- Straightforward
- Extendable
- Interchangeable

### iCONtrol

Provides you with a comprehensive portfolio of powerful machine control solutions that communicate seamlessly with your iCONstruct sensors on site and office software.

- Intelligent and flexible control system for construction machinery
- Reliable and seamless sensor communication
- Streamlined workflow & data handling

iCON
intelligent CONstruction

### iCONsult

An extensive support network, with clear guidance on intelligent CONstruction benefits to grow your business.

- Worldwide network
- Personal service
- Professional consultancy

### iCONnect

Offers easy data transfer from office to site, remote support for tablet users in the field, and basic fleet management functionality.

- Simplifies work processes, saving time and cost
- Instant guidance and checks
- Real-time data guarantees accurate jobs
- High productivity

**The iCONstruct product portfolio enables you to select your individual solution.**
Invest in the solution you need today and have the flexibility to expand your product portfolio based on your future needs tomorrow.

**iCON builder 60**
High-end manual total station, running iCON on colour touch screen.

**Leica iCON robot 50**
Mid-range robotic total station with one-button operation.

**Leica iCON robot 60**
High-end robotic total station with superior technology and iCON onboard.

**Leica Builder Series**
Intuitive, powerful and scalable series of total stations for routine construction tasks on site.

**Leica iCONstruct field software**
Core central interface to all iCONstruct sensors and devices with unmatched simplicity but no compromises on functionality.

**Leica iCON CC80**
Robust, lightweight tablet PC with multi-touchscreen and versatile communication capabilities.

**Leica iCON prep**
Easy data computation & preparation tool with the same user interface as the iCON field software.

**Leica ConX**
This cloud-based collaboration tool allows you to manage, monitor and share in real-time your connected construction projects, including third party platforms.

**Leica Infinity office software**
Compatible to most CAD, BIM and GIS data. Ideal to import, visualise, and manage iCON data easily, all in the 3D viewer.

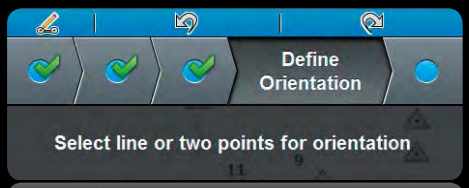
Understanding construction.

# Leica iCON build
## Straightforward software design

### Learn how to gain productivity with iCON build

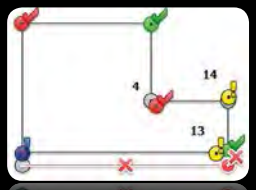
- One software solution: covers all your measurement tasks
- Learn only once: iCON build user interface works with all the iCONstruct equipment, both GPS and total stations
- Speed up: get familiar with simple and intuitive software in minutes
- Focus on the job: let built-in intelligence guide you to results

Search Pilot

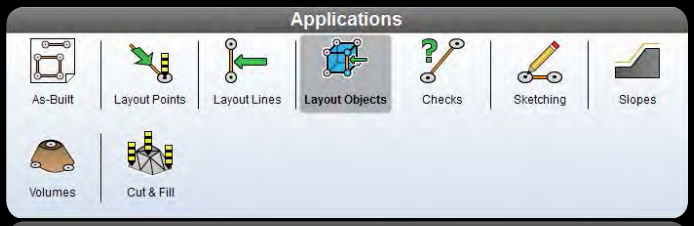



Typical Wizard

- Do it right: colour coded warning system forces to keep tolerances

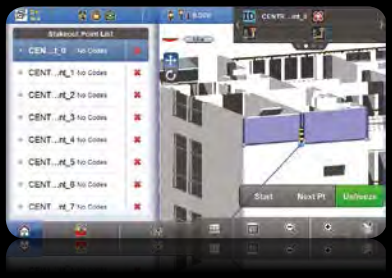



- More performance: add individual apps any time




### Learn how to structure your data and create work packages

- Loading IFC design models enables object-driven layout
- DXF direct: import DXF files with no need for prior conversion in the office
- MapOPS: treat layers and files the same way
- Tree View: reduce model content to relevant objects only
- Stake Out list: create work packages for quickest layout process



**3D Orbiting**
Let's you orbit your model in 3D and switch to 2D plans

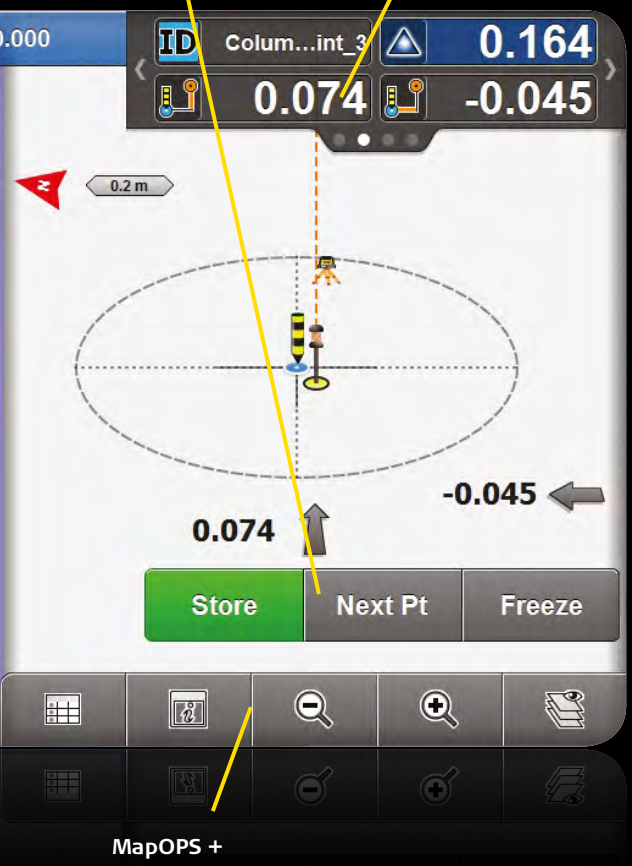
**Status Bar +**
Clear status information PLUS shortcuts to most frequent tools

**Tool Bar**
Contains most relevant tools and functions tuned per application

**IntuiNav +**
Intuitive icons, traffic light colour codes and wizards for secure decision making. Straightened map via Split Screen and 3D graphics for clear data representation

**Measure Bar +**
Configurable measure functions, visual and audio feedback, linked to controller hard key to trigger measurement, auto-switches to app specific task bar

**Info Panel**
Clear & immediate data and measure results including user guidance




**MapOPS +**
Intelligent map controls including Smart Zoom & Auto-Pan. Manage data & graphical contents of map with Point List, File & Layer controls and clever viewing options

## Leica ConX
### Digitalise your construction process

**Keep up with the schedule:**
- Share updates and corrections to reference model data in real-time across the project
- Visualise and validate data used and generated on-site in 2D and 3D localised on interactive maps
- Record as-built data and report back to office or inform pre-fabricating sub-trades
- No physical transport of digital data, all in real-time

**Ensure data integrity:**
- Always work with the most up-to-date plan data
- Remotely & online support your field crews
- Convert formats to integrate third party platforms
- Monitor operations remotely by assigning work and providing positing and reference data

ConX

## iCON prep
### Data preparation and as-built checking

- Prepare your field project in the office using the common iCON user interface
- Verify design data before releasing to field crews
- Check as-built data and compute distances, angles, are and volume

Understanding construction.

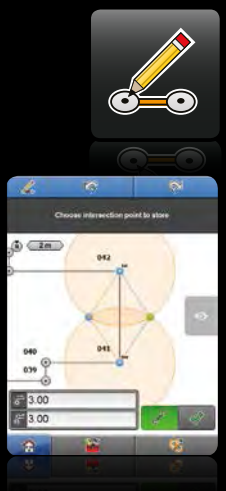
# Leica iCON build

## The complete solution for all positioning and measuring tasks on site

**Leica iCON build provides unmatched versatility and flexibility.**
It enables you to carry out all positioning related tasks with just one solution. In addition, each iCON build application offers unique features and benefits, performance and accuracy.

### Customize and extend your iCONstruct toolbox.

iCON build is part of the unique iCONstruct toolbox, providing you with one solution for all your construction tasks across the entire job site. iCONstruct offers you the possibility to extend and customize applications according to your needs.



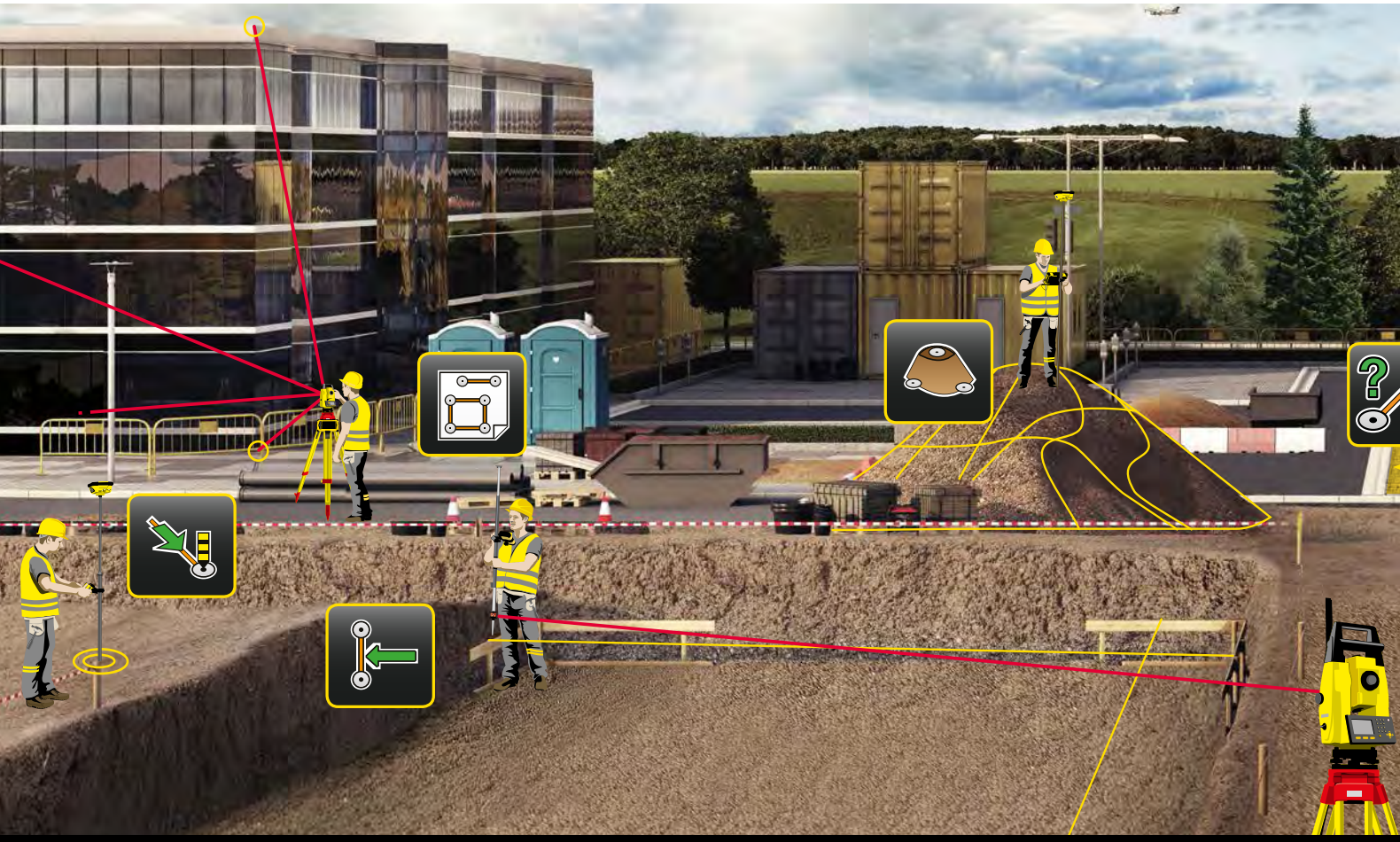
### Sketching

Applications

- Point Pilot for fast and intuitive input of plan dimensions
- Create points, arcs, lines, anchor bolts, patterns etc. within seconds

Benefits

- Easily replicate digital blueprints
- Fix incomplete data in the field by adding missing structures
- Immediate response to changes on site
- Update plans to reflect true situations



## Layout Lines

### Applications

- Layout control lines, parallels, perpendiculars or arcs and align structures in relation to them
- Apply horizontal and vertical offsets
- Stake out strings to mark elevation for curb reference

### Benefits

- Aligning columns and anchor bolt patterns easy and fast
- Simply rebuild and extend incomplete structures
- Monitor offset value to speed up form work erection
- Repeatable positioning of profile boards and precise transfer of alignments eliminating risk of board damage

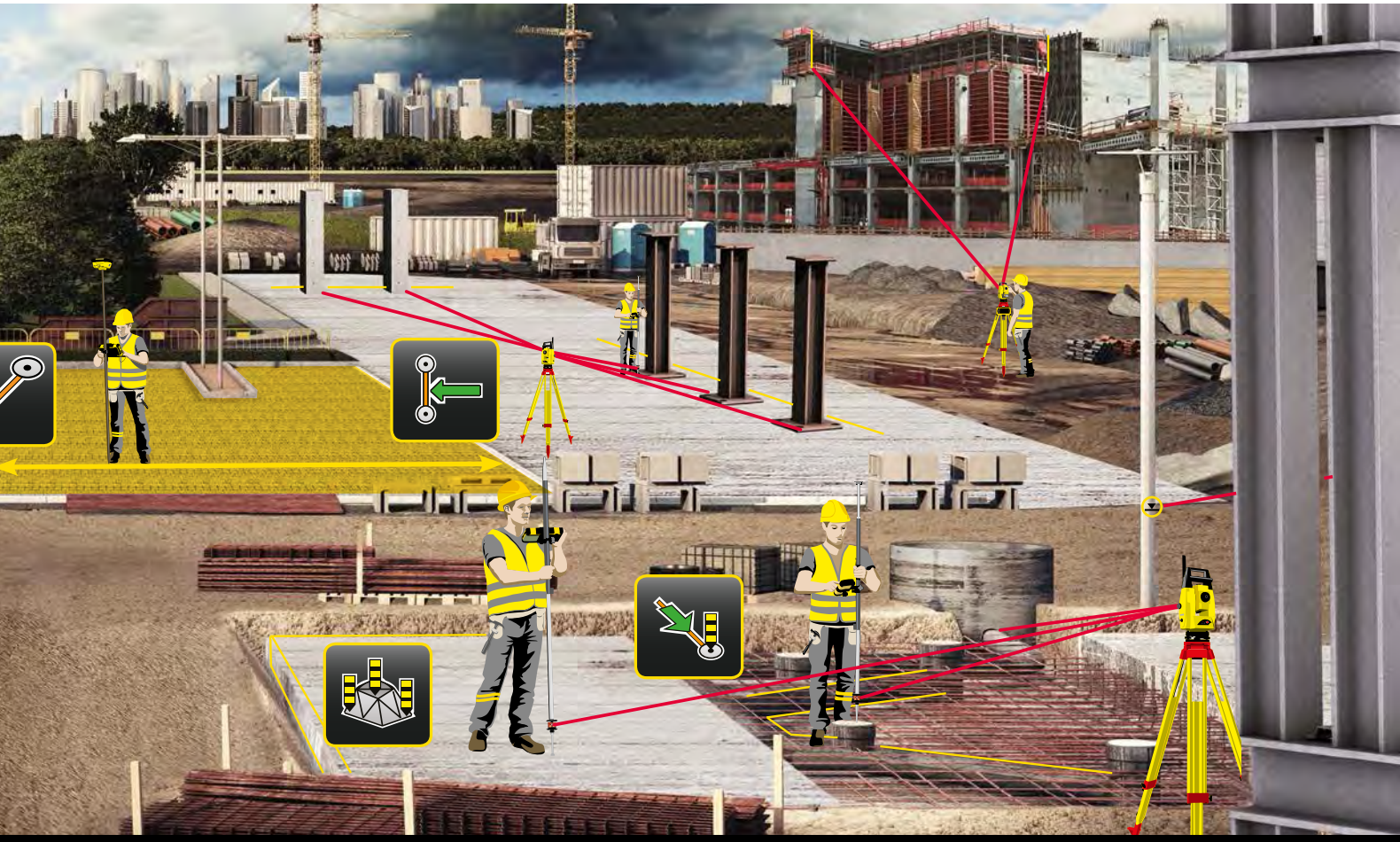
## Volumes

### Applications

- Calculate volume of a stockpile or pit, comparison between surfaces or to the elevation
- Apply compaction factor in relation to your material
- Read out balanced site elevation

### Benefits

- Accurate and flexible volume calculations, independent of size or shape
- Calculation of truck loading considering compaction factors
- Balance out Cut & Fill for optimised material and machine usage
- Monitor ongoing progress of earthworks



## Slopes

### Applications

- Mark the daylight line on original surface
- Define grades for excavations
- Install batter boards as slope indicators on embankments
- Indicate inclination for foundation piling

### Benefits

- Simple definition of slopes in %, degree or ratio in the field
- Graphical representation in top and cross-section view
- Secure navigation to correct elevation and position in sloped terrain

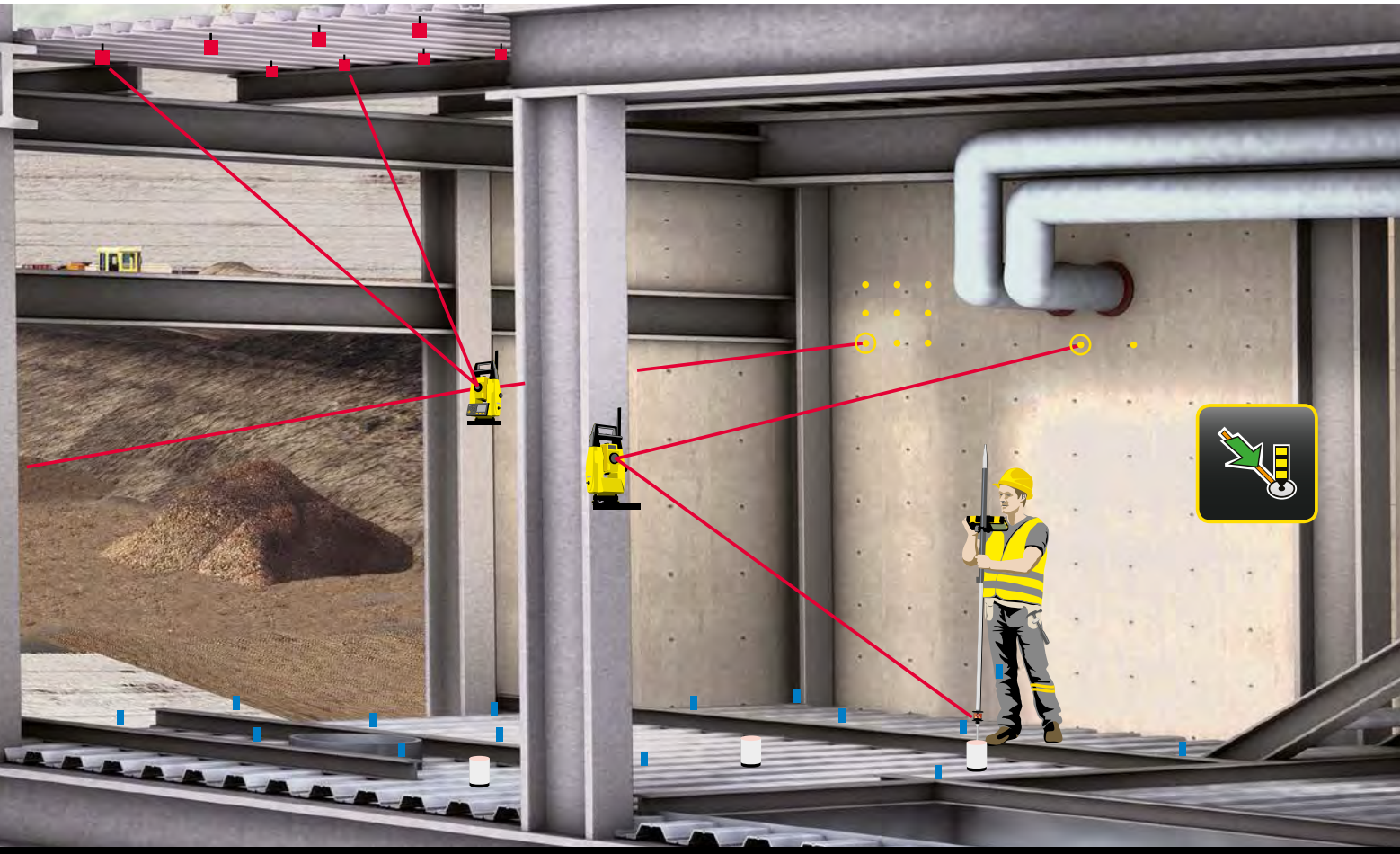
## Checks

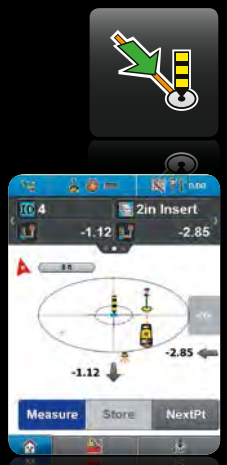
### Applications

- Check distances (horizontal, vertical, sloped)
- Check grades and angles
- Check area and perimeter in 2D and 3D
- Info panel shows all results at a glance supported with graphics in map

### Benefits

- Verify on site correct placement of walls, formwork, columns, pipes, etc.
- Decide in the field based on facts rather estimates
- Precise input for pre-fabrication of manholes, ventilation systems, windows or orders of sand, pavement, etc.






**Points & MEP Layout**

Applications

- Simply lay out sketched or imported points directly from the map
- Intuitively navigate to selected hanger, slit, insert, conduit, outlet, etc.
- Auto-select next point from list or the nearest from current location

Benefits

- Optimised in/out, left/right display via split screen and viewing options
- Colour code clearly indicates quality of laid out points
- Integrated tolerance checks increase precision and reduce errors
- Important point info available as code in info panel, e.g. "3/4" insert"

**As-Built**

Applications

- Capture points, lines or arcs in one step with immediate graphical representation
- Apply codes per point and store measurements automatically
- Unique Start/Stop line feature accelerates line creation

Benefits

- Reduce site visits by visually verifying the measurements in the field
- Assign as-built data to individual layers while collecting points
- Back-up your control lines
- Store accurate 3D data as base for any CAD/BIM office operation or architectural planning

Understanding construction.

# Leica iCON build
## Profit from your investment

Mike Prascsak, Frazier of Lancaster, California USA

**Project**: Construction sub-contractors
**Application**: Standard layout tasks

"On one recent project, a 30,000 square-foot building, we had a total of 1027 points to set. That includes footing edges, pier locations, bolt locations, and one man working with the robot, was able to do the work in two days," says Prascsak. "Previously, that would have taken three days with a two-man crew."

Jonas Nielsen, owner of JN Gravning, Denmark

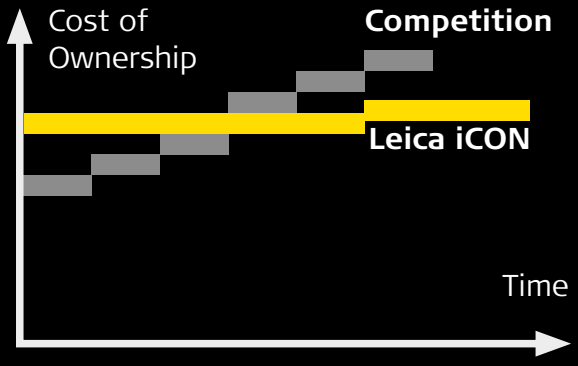
**Project**: Preparing the terrain for a large house-building project
**Application**: Stake out

"Where technologically based measuring equipment is concerned, in just a couple of years I have moved from absolutely nothing to a two-man manual Leica Builder R200M solution and recently to the most advanced equipment in the segment; the motorized Leica iCON robot 50 total station," says Nielsen.

Craig Poortinga of Walrite LLC Colorado Foundation Contractors, USA

**Project**: Construction concrete footings
**Application**: Layout

"It's a daily saving for me," Poortinga says. "I'm not only saving on those parts of the job they don't need to do anymore, but I can have them focus on other parts of the job that make it better. Instead of having three guys together to do a layout, one guy can do that while the other guys focus on the other details of the job, such as putting foundations together and making sure we aren't missing the drops."

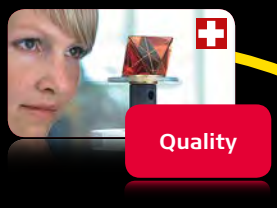



**High quality, lowest cost of ownership**
Leica iCON with its high quality manufacturing and a range of Customer Care Products, ensures significantly reduced downtime. Periodic preventative maintenance will maximize productivity through training and innovative software improvements. Leica iCON offers the lowest cost of ownership and highest residual value.

Learn how iCON build pays off

# Leica Geosystems
## Your trusted partner

**A site only works if all parties involved can expect professionalism in the execution of the individuals' tasks – resulting in strong partnerships. To ensure that Leica Geosystems fulfils highest expectations and is chosen as your partner, we continually focus on six areas.**



**Quality**

- In listening to your needs
- In the expertise of our sales & support teams
- In manufacturing and all development processes

**Reliability**

- Of commitments made
- Of meeting the claimed technical specification
- Of the products in the field

**Trust**

- Our professional advice, be sure to work with the best adapted solution
- Our in-built checks, iCON build will keep you within project tolerance's
- Our future software improvements that deliver attractive Customer Care Packages

**Partnership**

- By using iCONnect telematics remote support and data synchronization
- By accessing the Leica Campus with online tutorials, webinars and frequent training
- By listening to your ideas, recommendations and problems

**Versatility**

- Through iCON build software that extends to grow your business
- Through exploring related segments by adding individual apps
- Through interchanging equipment between manual or robotic total stations & GPS

**Innovation**

- Ensures the most exciting and best tailored user interface
- Ensures keeping things simple for our users which requires innovative solutions
- Ensures we listen to you and understand your construction applications

- when it has to be **right**

Leica Geosystems

Understanding construction.

**Leica Geosystems intelligent CONstruction.**
Whether you construct buildings, roads, bridges or tunnels, you benefit from intelligent CONstruction. Leica iCON is more than a new product line or software package, it enables you to enhance your performance and increase your profitability through perfecting your construction workflow.

Understanding construction demands outstanding solutions:
- Custom-built
- Complete
- Straightforward
- High performance

**When it has to be right.**

Swiss Technology by Leica Geosystems

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Leica iCON build
Layout Object Flyer

Leica iCON robot 60
Product information

Leica iCON site
Brochure

For more information on leica iCON products and services, please visit: **leica-geosystems.com/icon**

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