

# Leica iCON site

Custom-built solutions for  
site construction



# 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 and machine, remote support for operators on the machine, and basic fleet management functionality.

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



# Leica Geosystems

## Your trusted partner

Leica iCON is the result of a vision, based on our commitment to provide you with high standard product and service solutions. With our standards being strongly interlinked, we believe they establish a solid foundation for shared growth and success.



Understanding construction.



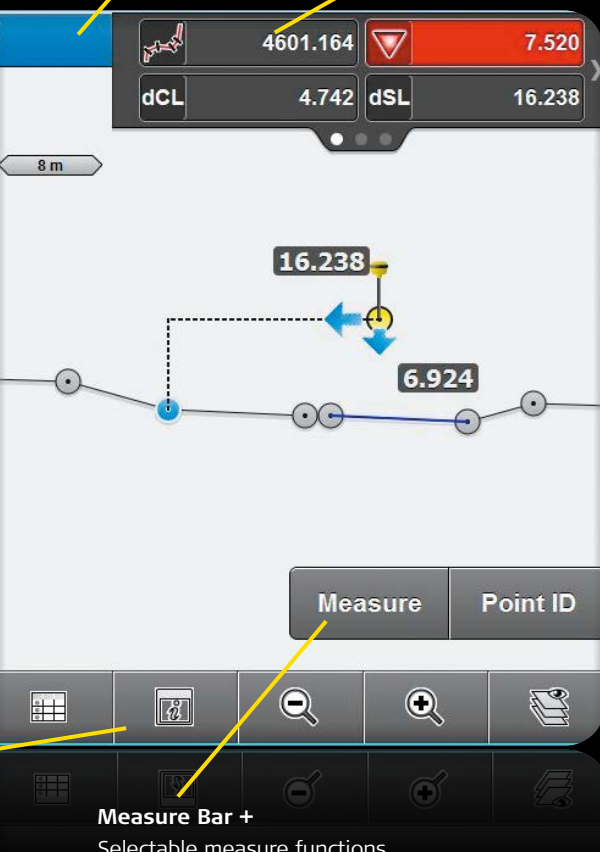
Construction workflows contain different disciplines which have to work closely together. Only by cooperating smoothly, construction sites become productive and efficient. The Leica iCON portfolio is designed to efficiently connect the different tasks on construction sites. Integration and connectivity from the office, machine and field increases site productivity and ensures high uptime on site.

#### Status Bar +

Clear status information plus shortcuts to frequently used tools

#### Info Panel

Clear & immediate data and measure results including user guidance



#### Measure Bar +

Selectable measure functions, visual and audio feedback, linked to controller hard key to trigger measurement, auto-switches to app specific task bar



#### iCONtroll

Take your on-site workflow to the next level with Leica Geosystems iCONtroll machine control solutions. It communicates seamlessly with iCONstruct sensors and iCON office to enable a smooth workflow and

increase productivity. iCONtroll machine control solutions grow with your business; upgrade your 2D machine control system to 3D and benefit from advanced functionality. iCON site is the perfect add-on for machine operation, independent of 2D or 3D usage. With 2D, it provides the machine with the absolute position on site. With 3D, the same data is used in the field and office, increasing data quality and efficiency. As-built checks with iCON site supports all machine workflows on site.

#### Leica ConX

Digitise your construction process with Leica ConX, a web-based suite of tools that harmonises and simplifies the data handling for your machine control operations, significantly reducing your downtime. Manage, monitor and share construction and survey data in real time wherever you are. This cloud-based collaboration tool

allows you to efficiently manage all your connected construction projects, including third party platforms, and share job-related data with all stakeholders. With Leica ConX, non-experienced users will be able to visualise and validate localised reference models, survey data and constructed as-built data in 2D and 3D.



Understanding construction.

# Leica iCON site

## Profit from your investment



Mikael Bertilsson, Owner and Foreman at Gotene Grävtjänst, Sweden

**Project:** Water and sewer project, 110 km.  
**Application:** Stake-out and documentation.

"As a company, we have become more flexible and can provide a complete solution when we do stake-out, regular checks and calculate volumes. It's very easy to get started with the equipment and it provides us with flexibility as a company. I can be on location when needed and always feel a step ahead on projects".



Andrew J. Closser, Owner of Millenium Contractors at Indianapolis, USA

**Project:** New football field cathedral high school, Indianapolis Indiana, USA  
**Application:** Checking grades

"It saves us money. Before iCON site, we'd have three guys pulling strings just to grade parking lots and buildings. Now those guys can be doing other more productive tasks. The ease-of-use to grade check and having the whole jobsite on our screen is a great help. It also gives us control over our jobsite and lets us control how we work the jobsite. It has made us more competitive. We can finish jobs faster which increases our revenues and profits."



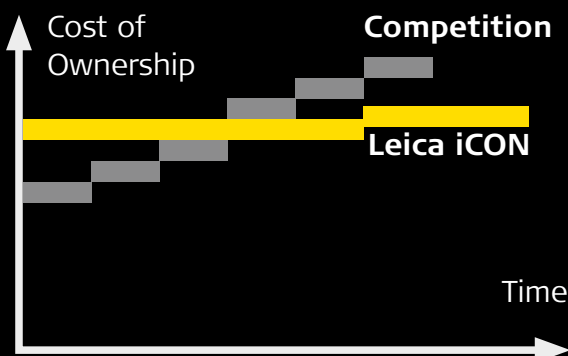
Philip Boesch, Civil Engineer at Implenia, Switzerland

**Project:** Road construction project in Switzerland  
**Application:** Checking grades, Stake-out

"The iCON solution allows the foreman on the construction site to check stake-out points on his own. The foreman can brief his team on the construction site, and afterwards he can concentrate on surveying. It helps me as foreman to check the points independently or to stake out points in advance. It's just helpful. In the past, two or three workers were needed to do stake-outs on the construction site. Today, this can be autonomous and saves time, saves manpower and promotes efficiency."

### High quality, lowest cost of ownership

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



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.



**Leica iCON gps 60**

Versatile smart antenna for multi-purpose positioning tasks.

**Leica iCON site field software**

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



**iCON robot 60**

High-end robotic total station with superior technology and iCON onboard.



**Leica iCON CC66**

Rugged, mobile tablet PC with enhanced connectivity and functionality.



**Leica iCON CC80**

Robust, lightweight tablet with multi-touchscreen and versatile communication capabilities.



**Leica iCON prep**

Simple tool to verify field data in the office by using the same user interface for field and office.



**Leica iCON robot 50**

One-person operation, saving time and increasing productivity when carrying out layout tasks and as-built checks.



**Leica Infinity office software**

Data preparation, verification and reporting of simple to complex projects.

Understanding construction.

# Leica iCON site

## Straightforward software design

Gain productivity from iCON site.



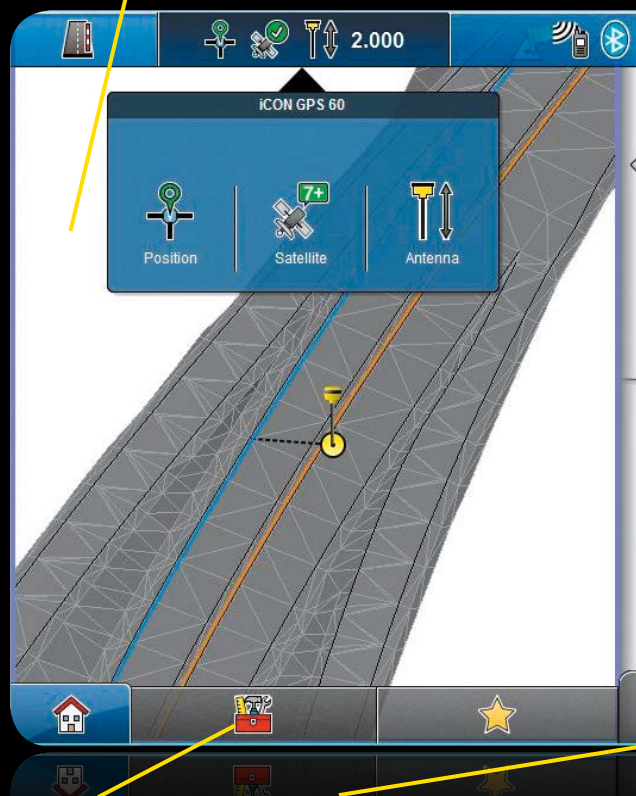
Designed for site professionals such as foremen, site supervisors, grade checkers, and machine operators who need to efficiently perform measurement tasks on site.

- Benefit from automated measurement tasks done in real-time.
- Eliminate the guesswork of your project for quicker and more accurate invoicing.
- Increase uptime of the machines by keeping them up-to-date and productive.
- Reduce to the main functionality for straightforward and result driven workflows.
- Familiarise with the product faster thanks to an intuitive interface with an innovative design that simplifies your workflows.
- Stay advised with a traffic light warning system for each stake-out point.
- Connect to Leica Geosystems' trusted and accurate positioning sensors.



### 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



### Tool Bar

Contains most relevant tools and functions tuned per application

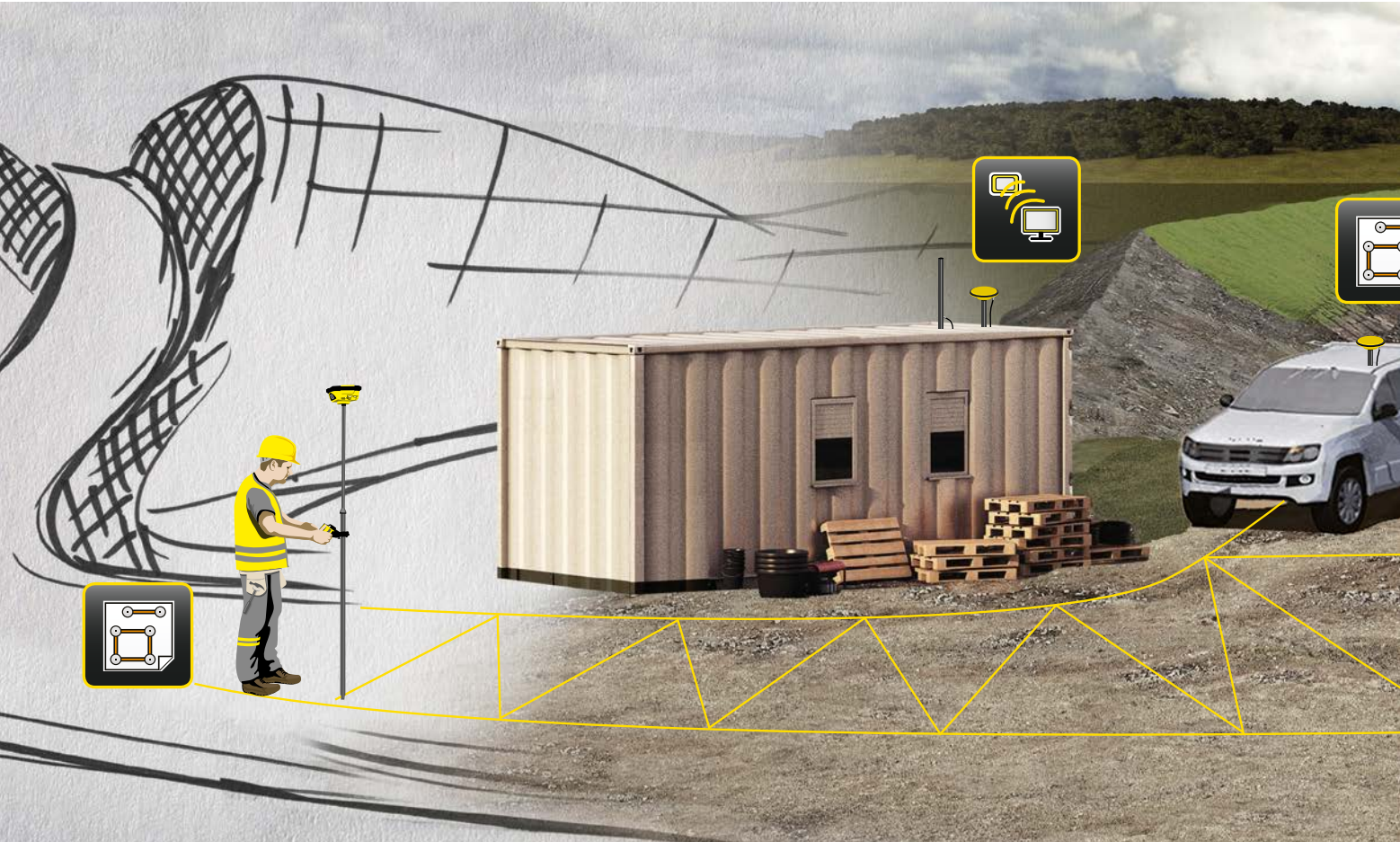
### MapOPS

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 iCON site

The complete solution for all positioning and measuring tasks on site



## Leica iCON site provides unmatched versatility and flexibility.

It enables you to carry out all positioning related tasks with just one solution. In addition, each iCON site application offers unique features and benefits, performance and accuracy.



## Site Infrastructure

### Applications

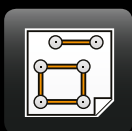
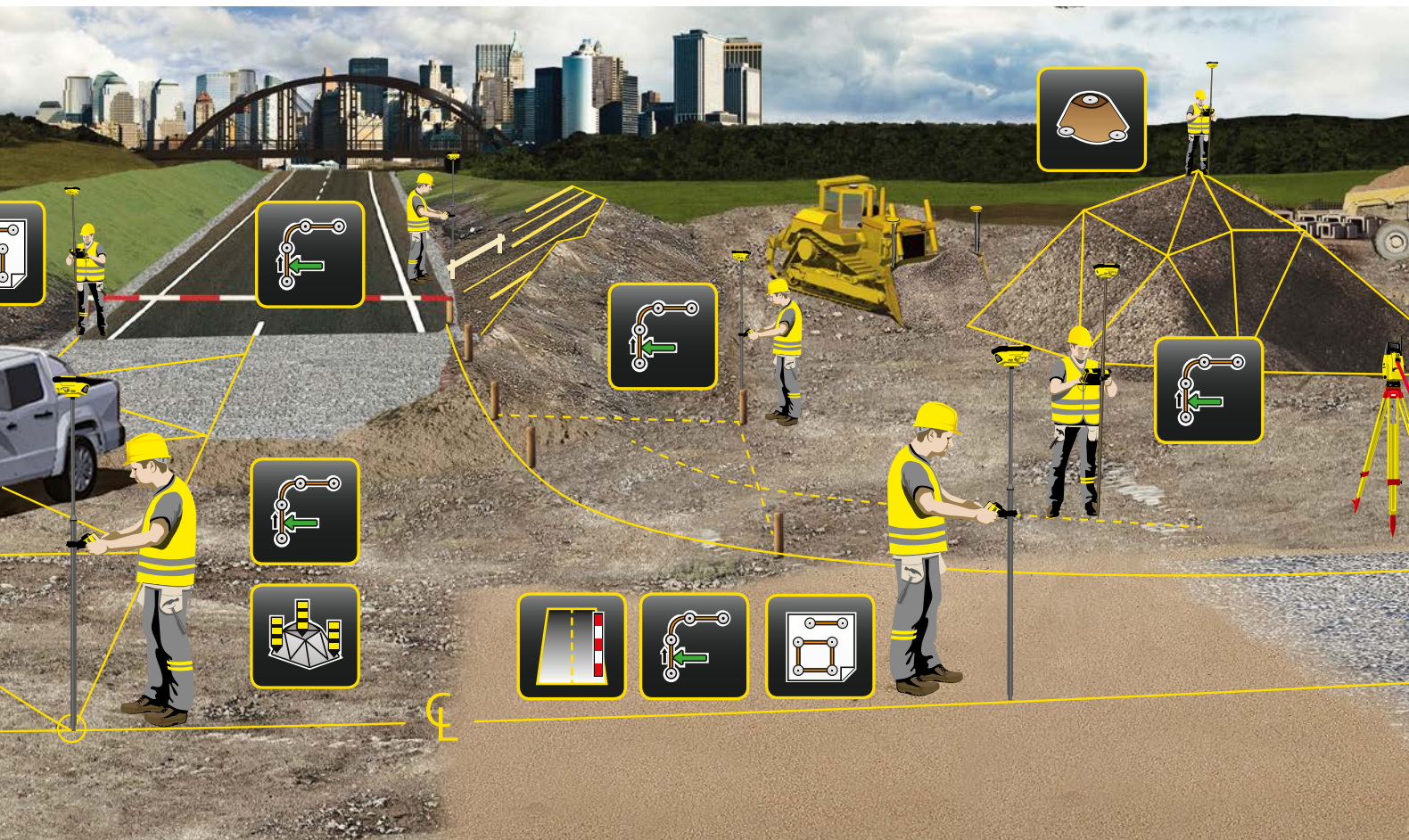
- Remote data transfer from office to field and vice-versa
- 24/7 GNSS reference station on site container
- Intuitive GNSS SmartAntenna display for easy set up and status
- Transmit GNSS corrections via RTK Network

### Benefits

- Fast reaction on design changes
- Distribute coordinate system to all machines without machine visit
- Save time by using the intuitive wizard to start Base Station without controller
- No radio interference = no range limitations, so you don't rely on network provider







### Site Surveying

#### Applications

- Measure points, lines or arcs in one step with immediate graphical representation
- Apply codes per point and store measurements automatically
- Advanced automatic logging by distance or time

#### Benefits

- Measured elements are stored accurately and visualised, reducing the number of site visits
- Create 3D maps in the field as basis for road planning with CAD office packages
- Topo and DTM can be created quickly with quad or 4-wheel drive



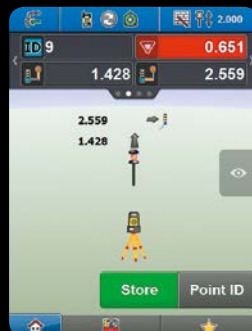
### Stake-out

#### Applications

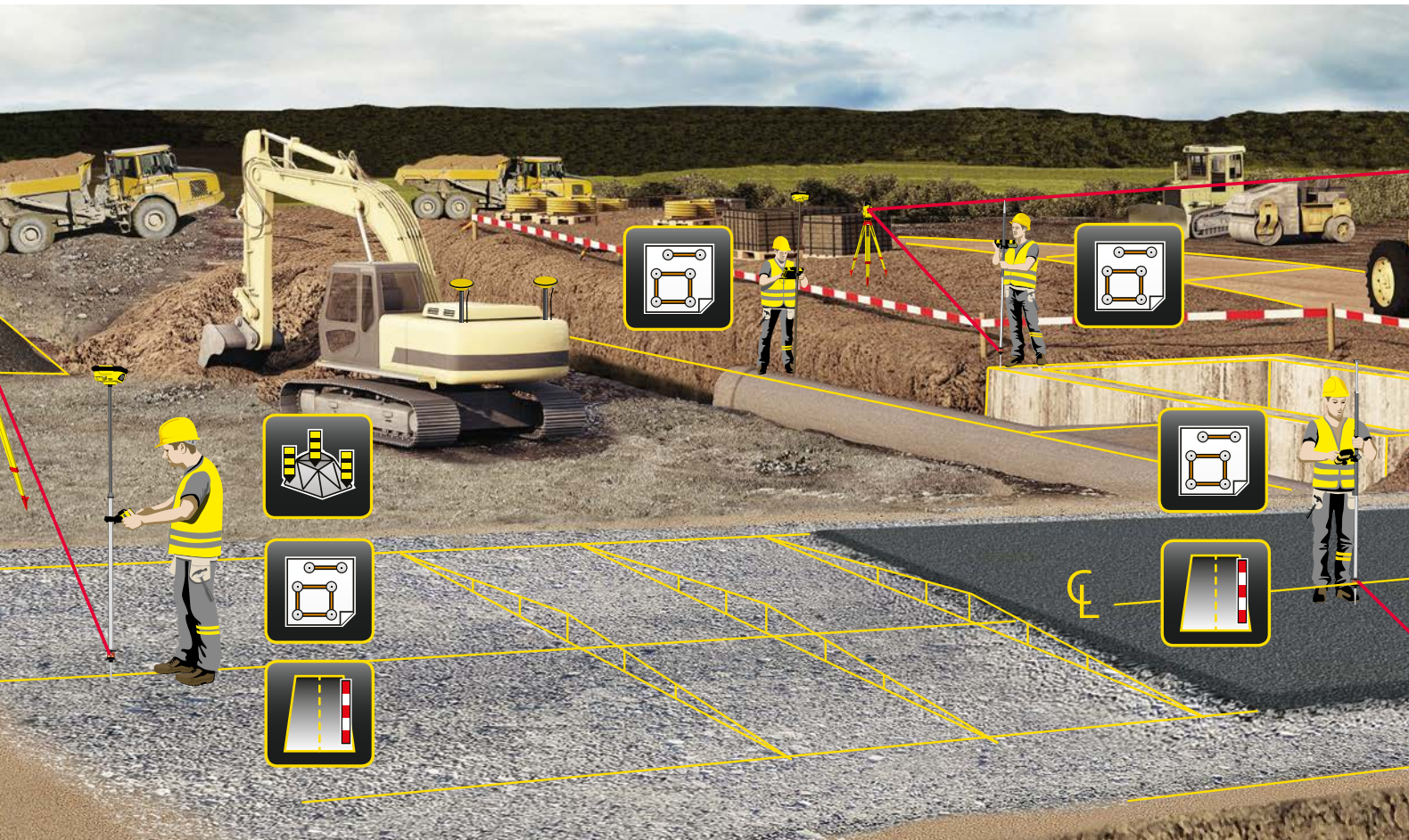
- Simply select reference points, centre lines, parallels or arcs directly from the map
- Select any line as reference for line/offset display
- Apply horizontal and/or vertical offsets, including stationing
- Colour coded results provide clear quality indicators

#### Benefits

- Simply select elements from map or select from list to stake-out
- Simply rebuild and extend incomplete structures
- Using reference lines contributes to better orientation on site
- Integrated tolerance checks increase accuracy and reduce human errors







## Volumes & Surfaces

### Applications

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

### Benefits

- Accurate and flexible volume calculation, independent of size or shape
- Balance out Cut & Fill for optimised material and machine usage
- Monitor the ongoing progress of your earthworks



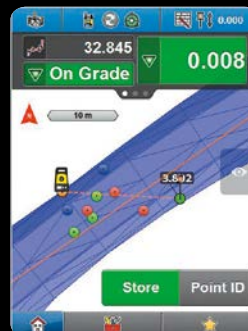
## Cut & Fill

### Applications

- Check actual surface against design elevation
- x-section view for foreman application
- Quick colour coded Cut & Fill verification in line with machine control solution

### Benefits

- Optimise material savings (e.g. asphalt) by checking sub-ground elevation and tolerances
- Better orientation using x-section view
- Better visibility by using same look and feel in machine and field solutions







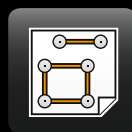
### Roading

#### Applications

- Accurate model for highest accurate road stake-out
- x-section view for better visibility and orientation
- Quickly adapt on design changes with hold x-slope or create x-sections

#### Benefits

- Optimise material savings, by high accurate design model
- Fast reaction in the field on required stake-out elements



### As-Built

#### Applications

- Compare constructed vs. designed model
- Graphical indication of measured points, lines and arcs

#### Benefits

- Collect as-built data for client records, e.g. for future reconstruction or accounting
- Reduce number of site visits by visually verifying correctness of measurements in the field
- Assign as-built data to individual layers while collecting points
- Collect immediate as-built data without waiting on third party specialists



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.**



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iCONControl Brochure



Leica iCON gps 60  
Data Sheet



Leica iCON build  
Brochure

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- when it has to be **right**

