Virtualization helps to improve communication between partners and supports planning & design decisions.

OUR DIGITAL WORLD

- → Our Digital World
- > Managed Access Program (M.A.P)
- → SmartTag
- → BrandNet®
- > Surface Asset Management (SAM™)
- → 3D Engineering
- → Offshore Apps
- > Powered Access CMMS





Our Digital World

Our focus at BRAND® is increasingly on digitization, aimed specifically at simplifying work processes and offering transparency to contracting parties. New applications are always being developed to support processes throughout the supply chain, from onboarding to invoicing and after-services.

Savings and efficiency tools include;

- > BrandNet* is an innovative tool for the design and planning of scaffolding configurations, and for compiling work packages. With its 3D Scanning and 3D Engineering software, we are a front-runner in detailed construction specification.
- > We developed two apps specifically with offshore customers in mind: the Scaffold Registration App and the Time Entry App. The online SAM™ (Fabric Maintenance Management) tool is used to manage the condition of coatings and painting operations.
- > With SmartTag, we offer customers a tried-andtested cloud-based scaffolding management system developed by the IT specialists of BrandSafway. SmartTag is an online addition to the popular Scafftags system, and satisfies the need for real-time information.

"Others talk. We get results."



Managed Access Program (M.A.P)

All of the knowledge and experience from the our access specialists has been distilled into an automated application: The digital tool Managed Access Program (M.A.P) uses input such as the job type, lead times, surface, working height and other variables to propose the most efficient access solution for any project (e.g. the use of scaffolding, AWPs or rope access). The tool's database is populated with the customer's contract conditions, making each implementation client-specific.

Savings & instead of and efficiency tool

Generate instant online recommendations and calculations by completing a few quick and easy steps. Customers can independently generate recommendations and quotes for any access project. Use the tool to tailor a safe and efficient solution for working at height with parameters to find out the best way to proceed, along with the potential savings. The system implementation also enables automatic ordering and scheduling of the selected products. Not only that, but it also saves log files and reports, allowing for an overview of the long-term savings. And because we put safety first, the tool includes mandatory standard and client-specific safety questions.





Scaffolding activities at a glance with **SmartTag**

Anyone who visits project locations will be familiar with the existing physical labels (Scafftags) that are attached to scaffolds. SmartTag is an online addition to this, satisfying the need for real-time information.

SmartTag ensures data quality

By marking every scaffold with a QR code, its history is accurately recorded and made accessible via the SmartTag system. Using a smartphone or tablet, generic data can be recorded in the field, such as date, time, location, dimensions and safety status. As the scaffolding inspector will first scan a personal QR code, the scaffold inspection and handover are directly linked to the scaffold inspector. The inspector will supplement the database with notes, inspection reports, photos and additional data such as scaffold type and scaffold status.

Once the scaffold is completed, our inspector and the client will both use the tablet to sign for approval.

At each subsequent inspection and modification, the QR code is scanned again and the information about the scaffold is updated.

Cost control

One of the major advantages of SmartTag is that the administration can be updated more quickly, making it easier to manage costs. The direct and real-time access to the scaffold activities provides accurate management and control. It has never been easier to remove a scaffold or indeed to leave it standing for further activities.





User-friendly reports

SmartTag's custom reports make it easy for users to create and customise reports using the drag and drop function. They are free to select the variables they wish to see in a report, such as tag numbers, (date of) recent activity, type of scaffold, scaffold construction date, who requested a scaffold, who inspected it, etc. Filters make it possible to vary endlessly in the overviews, allowing you to always create just the one you need. The reports can also be exported directly to other systems for further processing.

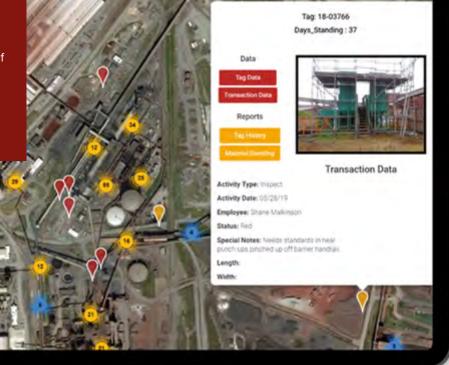
The geographic representation in SmartTag (Google Maps) is a popular feature. It provides information at a glance, which can be viewed in greater detail with just a few clicks.

SmartTag offers flexibility

SmartTag is a stand-alone system and does not necessarily need to be linked with client ERP systems. As a result, process-related or administrative changes to client systems have no direct influence on SmartTag. Clients see this as a major advantage - in SmartTag, data remains completely transparent and clients remain in control of the checking process.

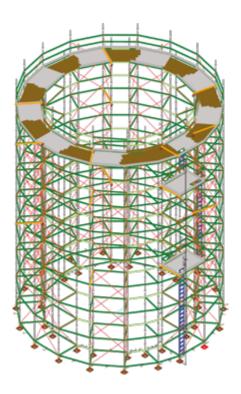
SCAFFOLD ACTIVITIES AT A GLANCE

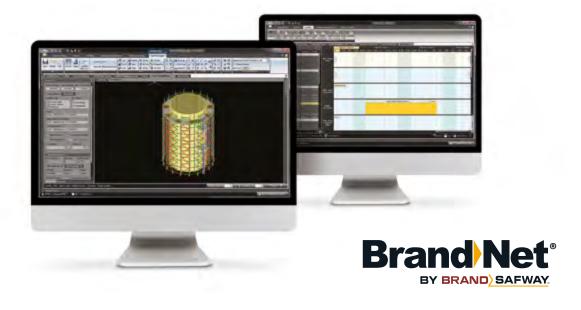
- > real-time information
- > direct and up-to-date access to scaffold activities
- > clear geographical views
- complete info for removal or continued use of existing scaffolds
- > user-friendly reports with export functionality
- > data quality assurance
- > improved safety standard
- > greater control of inspections





BrandNet® is an innovative application developed internally for the engineering, calculation and scheduling of scaffolding configurations. It has already proven its worth in America, and has been successfully implemented worldwide.





The BrandNet software has been designed for work planners, project managers, engineers and calculators. Drawing on extensive expertise in the field of access services, the tool was developed by our internal team in the USA. The simplified workflows produced by BrandNet enable ease and speed of integration into projects by all project staff.

Useful for all project stages

BrandNet was designed to offer full integration at any stage of a project. The application supports BIM and can be integrated into other BIM products, enabling the transfer of visual information (drawings/sketches), data and metadata, in order to ultimately generate savings and reduce failure costs.

BrandNet scaffolds can be designed and displayed in 2D or 3D by entering a few simple parameters.

The designs are complete and detailed, and include components such as ladders, scaffold floors, toe boards, handrails, etc. An extremely detailed calculation can then be generated at project level, along with an equipment list and work schedule.

What's more, BrandNet is compatible with a front end engineering and design approach, allowing the technical specification of projects at an early stage. Large new-build projects in particular can benefit from early use of BrandNet for a recommendation on the most efficient use of scaffolding.

Combining BrandNet with workface planning can further reduce costs, by minimising the number of necessary scaffolding modifications during operations.

6

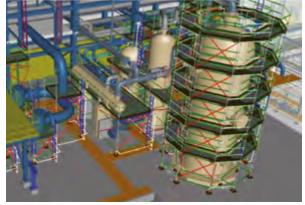
Fast lead times

The 2D and 3D images give customers a realistic impression of the available scaffolding, and modifications can be entered with only a few clicks. For relatively simple configurations, work planners can use the models to generate automatic working drawings and equipment lists, giving contractors all the information they need and guaranteeing fast lead times. If customers have no access to existing quality 3D models, we can use a laser scanner to scan the structures (or parts thereof).



Greater efficiency can be achieved through the use of constructions and configurations that have already been successfully applied in practice. Only when project requests are new, unique or have not been stored in the database will fresh drawings and calculations be generated. Ultimately this approach reduces the amount of bespoke work necessary, in turn shortening response times and lowering costs.

The database is therefore continually updated with new scaffolding configurations and suggestions on how to improve the safety of working conditions at height. This pool of knowledge is the added value that we can offer customers, with fast, targeted recommendations and efficient, inventive solutions.







Use **SAM**[™] for even greater control of CUI scope

Corrosion under insulation (CUI) is an ongoing concern in the industry, and various industry innovation programs have been launched to tackle the problem. In addition to primary innovations addressing insulation and coatings, a clear need has also arisen for practical inspection and management tools.

"The solution: We have partnered with software provider SAM™ to offer a simple web and tablet based digital application to manage Fabric Maintenance

SAM™ is an online tool for managing the condition of coatings and painting operations. SAM™ is a database-driven application for monitoring corrosion and managing the application of coating systems, fireproofing and insulation. A single point of access allows both contracting and inspecting parties to take joint responsibility for improved CUI monitoring.

SAM™ is the result of years of experience with companies who use their own spreadsheet systems to manage corrosion protection. The documentation of maintenance rounds was largely decentralised, often using paper reports that stood in the way of effective monitoring.

With SAM™, customers now have a full overview of all assets and components in use throughout their factory, installation or platform. All plumbing, equipment and metal structure drawings can be imported into SAM™, ensuring availability of information and providing an accurate overview of the CUI scope: the components requiring maintenance, the applicable product specifications and the necessary access.



1. Survey 4. Inspection Full cradle to grave Digital inspection monitoring and and verification reporting eq. NDT; Coatings; CUI and PFP **5. Performance** Progress and 2. Data productivity Input data once, auto 6. DFM generate a scope of work and tender document The Degradation Forecast Module 3. Work Packs Internal review and approval





Campaigns."

Client-specific implementation

When choosing SAM™, the client's system is configured in advance. SAM™ is tailored to customers by dividing sites into levels, and levels into zones. Once these have been created, it is possible to zoom in on an individual zone and the assets to be assessed within it. Each client can also set various background preferences and list values, such as the use of the Ri or Re scale to measure degrees of coating degradation. When entering each asset, values can be entered for asset type, paint supplier, coating system and access method, along with other parameters such as location, installation date, maintenance dates, surface area to be treated. and the percentage of blasting treatment required (heavy/light blasting). Further details can be entered under material data, such as the type of insulation or fireproofing applied. Non-destructive testing (NDT) results can also be recorded. The tablet version of SAM[™] enables easy on-site asset photography during the various stages, so that images can be stored in the database and the accompanying records added immediately. You don't even need to be online – the system will synchronise the data automatically later.

Step-by-step monitoring

Depending on how the entire CUI process is organised, customers can carry out the initial inspections and add values (in Re or Ri) themselves. In subsequent steps, both the inspector and coating specialist will add further data to SAM™. During the pre-treatment stage, the start date, initial condition and quantity of coating degradation on the asset





are recorded. The coating specialist's foreman will specify which operations were carried out, and sign them off. Next, the inspector will use the list of items to carry out specific tests, enter the results in SAM $^{\text{\tiny M}}$ and log the stage as complete.

This method, which involves repeated step-by-step monitoring by the inspector and concludes with final checks by the customer themselves, also applies to the following stages of the coating process per asset: Surface Preparation, Coating and Final Inspection.

Inspection reports are generated automatically on the status of an asset, both in advance and following the painting operations. The SAM $^{\rm m}$ inspection reports can also be exported and linked to work orders in the customer's ERP system.

Dashboards & reporting

Reports can be generated based on a variety of filters, such as Asset, Zone, Asset Type, Scheduled Year and Dates. In SAM™, dashboards are created automatically to ensure a rapid overview of all data collected during the inspection process, and provide real-time insight into CUI progress.

Many customers are using SAM™, and are very satisfied with the increased access to real-time data. The software is suitable for asset integrity management both on and offshore. And development hasn't stopped: new releases will incorporate improvements to both functionality and the user experience.



3D Engineering

efficiency in work processes

The 3D Engineering software for BIM (Building Information Modelling) supports a multidisciplinary project approach and design process. Its powerful 3D tools facilitate the creation of detailed construction models, and we have successfully applied the method to complex scaffolding configurations.

The method allows the engineering of scaffolding to be set out in detail in advance, allowing for the anticipation of later obstacles at height (even when setting up the first stanchions), and avoiding the loss of precious time due to unexpected modifications. The design can even be tested in advance for strength and stability.

3D scanning

If there are no high-quality drawings available of a factory or component, a 3D scan can be produced on-site. The scan will be sent digitally to our drawing office, where a full 3D scaffolding model will be created.

The 3D model is then exported to the EEM calculator to generate a quote. All external forces, such as workload and wind, will be entered by the structural engineer. Modifications to the design can be entered in the event of any complexities in the project. If the calculation satisfies the calculation criteria, the design can also be optimised in order to reduce the amount of equipment required.



Accurate & efficient

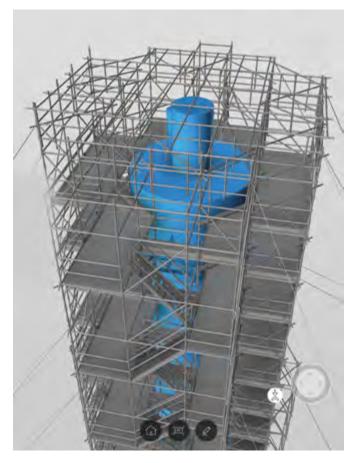
The 3D model of the scaffold includes a full list of materials, which our logistics department can use to prepare cargo. For setup and inspection purposes, the computer model can be used on a tablet, allowing rotation of the entire construction and magnification of details on-site whenever necessary. This method is far more accurate, efficient and user-friendly than making assessments based on AO drawings.

Efficiency gains

We recently and successfully applied 3D Engineering during a number of refinery projects in Rotterdam. Our expert engineering team were extremely satisfied: 'We did a 3D scan of a column, and constructed the scaffold in the resulting 3D model. The result was mind-blowing.

The high quality of the 3D scan meant that the scaffolding construction was accurate and true-to-life. This method could represent the future of engineering for scaffolding within our organisation.

The software also performed an efficient and precise static analysis of the construction, and all the required information was supplied clearly and in full. This method will greatly improve efficiency throughout the entire process!'





12



Scaffold Registration App

The Scaffold Registration App gives users access to all available information on current, scheduled and previously implemented scaffolding constructions. Our supervisors and project managers have instant access to all relevant features, drawings, calculations, inspection reports and handover documents on their tablets. Customers can also view the scaffolding files on their chosen devices (laptop, tablet, etc.).

The app enables safer and more efficient working practices for both our team and our customers.

Whenever repeat inspections are required at short notice, the app will send digital notifications to a client-specified e-mail address.

Offshore customers can also use the app to fulfil their obligations to the National Mines Inspectorate (SODM) with ease and flexibility.



Time Entry App

The Time Entry App offers a faster and more efficient timesheet solution. The details entered can be supplied in a custom format, allowing the hours to be imported directly into the customer's, administrative system. Our supervisors can also use it to more effectively monitor project progress, as hours worked can be compared to budgeted hours in real time. Contracting parties can use a tablet to sign off on the hours worked.

These apps have secured gains in many facets spanning a range of processes.

There are also major paper savings, as all information is exchanged digitally!

"The apps provide greater insight into what's going on, and grant instant online access anywhere, anytime. The benefits are huge!"

Customer responses are enthusiastic



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