Resco Inspections

SHAPE EVERY STEP OF THE INSPECTION PROCESS

resco.net
technology on the move

The Road We Are At

When it comes to the most trending topics today in regards to the mobile workforce, Inspections is most definitely a decisive element. Technology has been used in a variety of our everyday lives, both socially and professionally.

We have surpassed two industrial revolutions and our third industrial revolution is yet to come. While we are able to reduce so many marginal costs today, thanks to technology, it's not something to be concerned about. There are plenty of opportunities to excel and even grow with the changing economy that technology is fueling.

Three pivotal technologies that are slowly but surely converging on us are: **an ultra-fast 5G communication internet, a renewable energy internet, and a driverless mobility internet,** which is all connected to the Internet of Things bounded by society and our environment. While we are slowly diverging away from both economic and environmental inefficiencies, we are striving to create/utilize three key factors that will propel us to a more sustainable way of living and increased productivity: better machines, better workers, and aggregate efficiency. Aggregate efficiency is simply the ratio of useful to potential physical work that can be extracted from materials.

So, while we are busy inventing the next set of best inventions to create a more productive and sustainable way of living, our workforce is going to change. With better machines, we're going to have to gear up better workers. Machines can only do so much of the work for what's to come. Whether it's a digital transformation in the industry, where robotics comes into play to do things more "efficiently" or repetitively, there are simply things that cannot be replaced by the human workforce.

Who is going to create, setup, maintain, and inspect all these new forms of technology to come?

For example, all these telecommunication towers that are going to be taken down, and replaced with more modern, energy efficient, less invasive structures to support 5G communication & internet. Or how about the extraction of renewable resources – who is going to build these infrastructures, and maintain them for prolonged longevity? And how about a driverless workforce – where goods are being transported by self-driven machines, but the data must still be accounted for, collected, and the machine must be accounted for and inspected.

These are just simple examples of how the world is going to proactively change, and progress for the better good. While people fear the loss of jobs because machinery will be replacing so much of what technology can do quicker and more efficiently, people are still going to be play a crucial role in these changes and we're the only species viable to build, maintain, inspect, and keep the cycle continuous. Our economy and overall workforce is going to become more agile, more productive, and more transparent.

resco.net
technology on the move

So how does Resco come into the picture? Well, technology that is being created, built, and maintained by these better workers are also going to need to be equipped with the right software technology to do their inspection jobs day-in and day-out. We are tremendously focused on keeping up-to-date with not only the latest market trends, but also social and economic factors that drive our work environments. Inspections and the Internet of Things are going to play a crucial role in the mobile workforce that's to come, and that's just the tip of the iceberg.

Inspection jobs can vary in forms or whether they take place externally at various job sites, or even at one central location where routine check-ups happen accordingly. Whether surveying customers in-store, or progressing to complex machinery maintenance checks, to assessing damages after weather interferences, Resco Inspections will equip you every step of the way. Let's look at a few in-depth examples of today's Inspection jobs already in demand.

Home & Energy Inspections

Some standard inspection jobs that we are familiar with of course are energy meter inspections (natural gas, water, etc.) at homes and various commercial properties.

However, did you know this sector can get very widespread?

- Energy Audits (Residential, Commercial, and Government (GSA)
- IECC Energy Code Inspections
- Ventilation Testing
- CO and Gas Leak Testing
- Duct Blower (duct system pressurization/depressurization)
- Infrared Thermography

Offshore Wind Energy Inspections

Inspections can be carried out at any point during the fabrication, commissioning, and operation of the equipment. Typical milestones that require inspections are:

- Dynamic surveying
- Planning and evaluating maintenance
- On-site rotor blade inspection
- Manufacturing of components
- Storage/Transport of equipment
- Assembly of assets
- Commissioning projects
- Assessing asset performance and condition during operations
- Investigating damage
- End of warranty

Check out our case study for MHI Vestas Offshore Wind A/S and learn more about integrating mobility in challenging conditions. Read more >>

Automobile Mechanic Inspections

We are all pretty familiar of routine automobile check-ups. Just like changing your cars motor oil is an absolute must, there are other routine inspections that are carried out with your vehicle.

- Exterior Inspections (windshield, headlights, brake lights & more)
- Interior Inspections (airbag safety, emergency brake, air conditioning)
- Wheels (tire tread/wear, PSI, axles, rims, fifth wheel, fasteners)
- Under Hood Inspections (battery, carburetor, check engine, clutch, air filter)
- Under Vehicle Inspections (transmission, brake lines, fuel lines/tank, shocks & suspensions)

Aircraft Control Inspections

These inspections are very rigorous. There are different levels of inspections that take place throughout the year in addition to standard airplane and flight inspections.

- A Check - performed approx. every 400-600 flight hours / 200-300 cycles
- B Check - performed approx. every 6-8 months, requiring 160-180 man-hours)
- C Check - performed approx. every 20-24 months / specific flight hours
- 3C Check - intermediate layover checks – light structural maintenance, etc.
- D Check - heavy maintenance visit, is the most comprehensive check for an air plane

Telecommunications Inspections

There are various components to these inspections, ranging from telecommunication towers, to internet and more. Whether structures are being built, all the way to maintenance inspections, it varies immensely.

- Grounding Inspections
- Building Protectors & Maintenance
- Relay Rack Inspections
- Colored Station Fields & Patch Panels Checks
- Build Inspections (Concrete, Earthwork, Metals, and Electrical)

Weather Damage Control Inspections

When it comes to weather, mother nature can be quite unforgiving in various storm scenarios worldwide, and this is just a fraction of the overall scope of things.

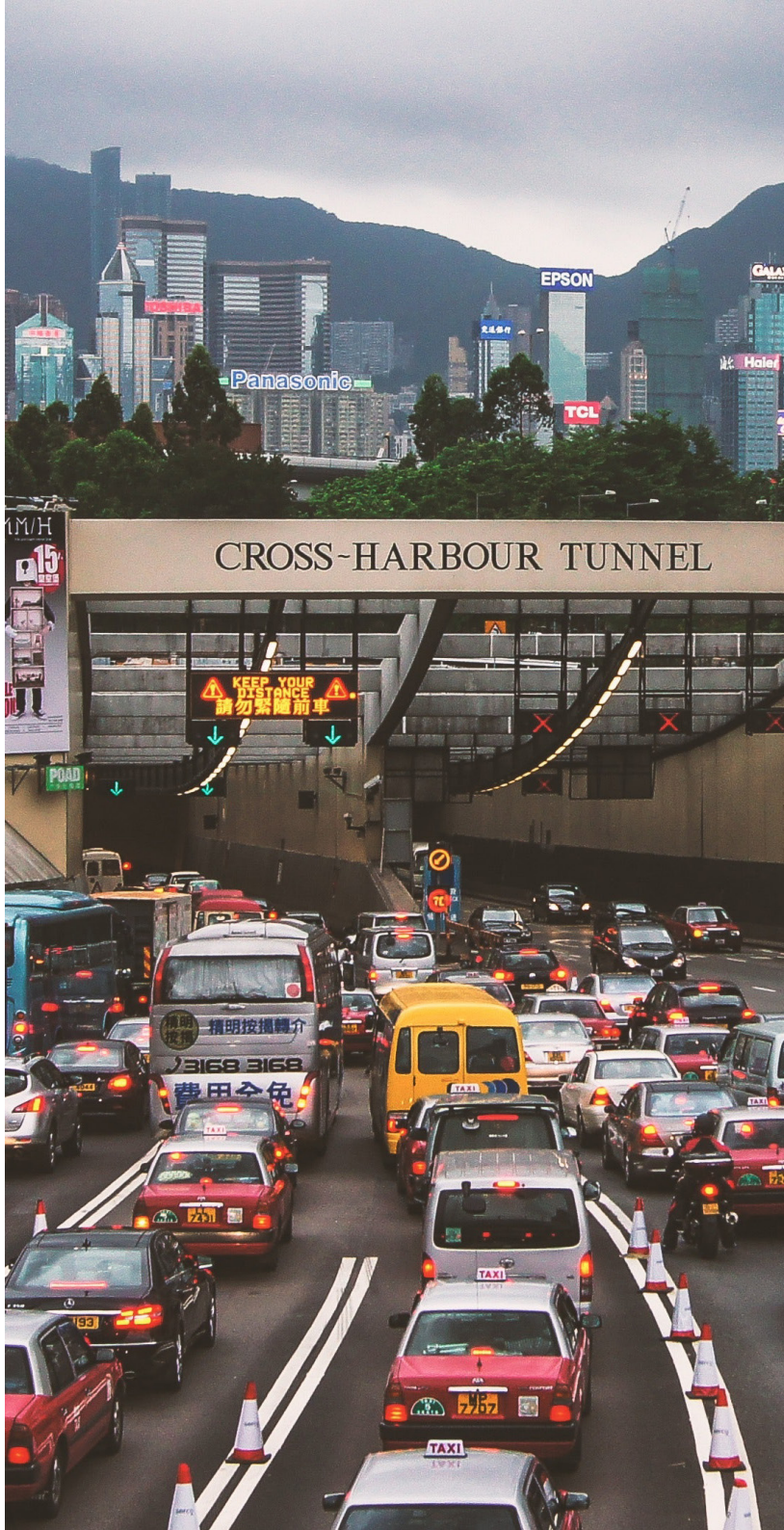
- Overall Damage Control
- Salt-water / Fresh Water (drainage, flooding)
- Hail & Wind Damage
- Fire Damage
- Sanitary Inspections
- Earthquake Control
- Property Damage
- Clean Up

Border Crossing Inspections

There are many ports of entry when it comes to border crossing inspections. It can be contrasted with customs and immigration facilities at seaports, international/domestic airports, land border crossings, and more.

Whether it's to prevent entrance of individuals who are potentially harmful (criminals or others who pose a threat), are all verified through various check points and information awareness methods.

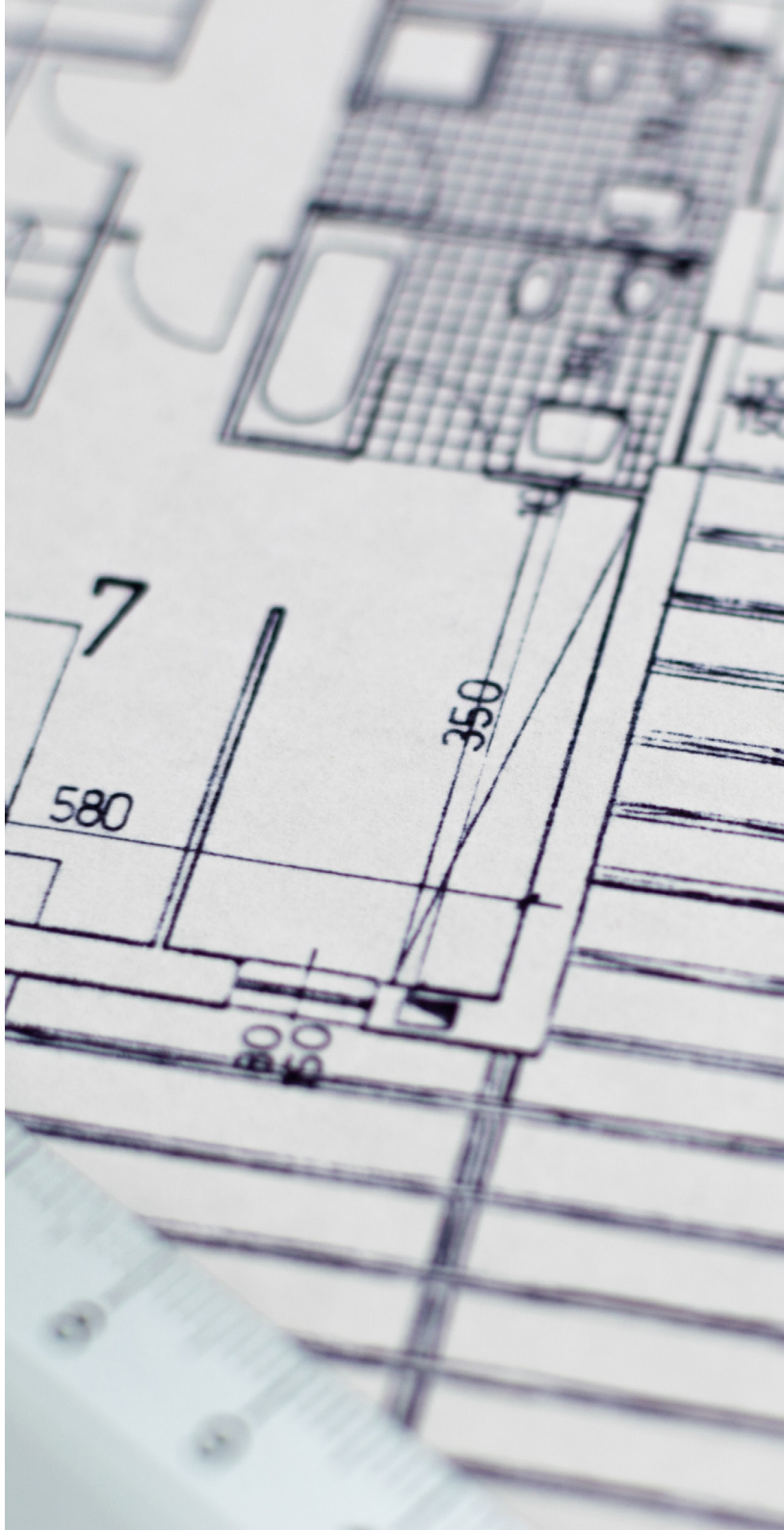
There's also inspection in terms of illegal goods and substances that are restricted in border crossings that are also carried out by border patrol agents. Whether you came off a plane, a boat, ferry, or even traveling by car, routine inspection checks do take place.



Property Inspections

Inspections in this sector vary as well. Whether it be for insurance purposes or building approval inspections. Property inspections also are becoming far more strict when it comes to building codes and other areas of interest.

- Survey property conditions
- Possible repairs/upgrade inspection checks
- Water and pipe inspections
- Electrical wire and connectivity inspections
- Natural Gas and Heating / Radiators
- Energy efficient installations
- Build code approvals
- Overall safety checks



Insurance Inspections

Insurance is available for almost any type of asset and can be intended for both individuals and companies. Before a new contract is signed or when an unexpected event takes place, rigorous conditions, specific to each type of asset and event, are being checked.

- Automobile insurance
- Safety insurance
- Home insurance
- Insurance against insolvency
- Health and life insurance
- Commercial property insurance

Manufacturing Inspections

Whether it's an automobile manufacturing plant, or other industry sectors, various inspections take place prior to any build, construction, and even final deployment. In order to get that stamp of approval, there are checks for every checkpoint in the manufacturing lifecycle.

- Safety Control Inspections
- Quality Control
- Visual/Sensory Inspection
- Infiltration Testing
- Diagnostics Testing

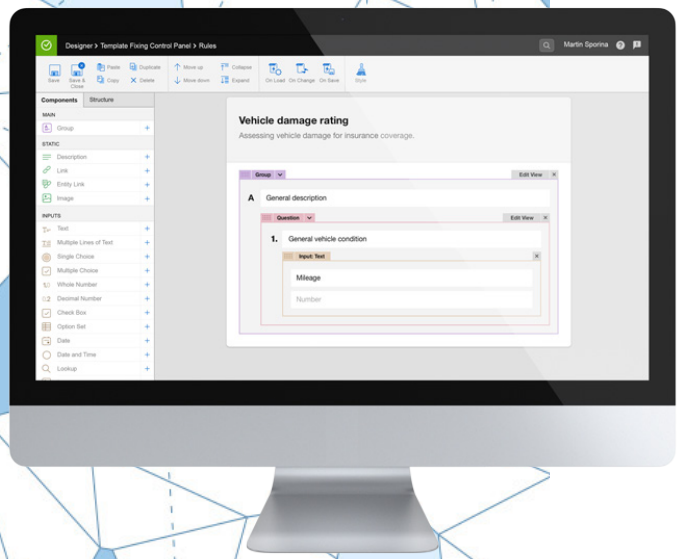
The need for Resco Inspections

The examples above show how inspections come into play in various scenarios. Each use case might be a little different, but they all share a common trait – there's more to the process than just someone with a notepad filling out checkboxes. By examining the process, we have divided the inspection work-flow into four stages:

1. **A relevant questionnaire is created.**
2. **The questionnaire is assigned to available staff, including all related information, such as date, time, or location.**
3. **The team in the field uses the available information to carry out the inspection, completes the questionnaire and sends back the results.**
4. **Results are evaluated.**

A successful software solution needs to focus on each of these individual steps, while also keeping the big picture in mind. Different team members have different roles and responsibilities that all need to be catered to. That's why we have designed Resco Inspection as a complex, yet comprehensive solution consisting of **four applications – Designer, Scheduler, Inspector, and Analyst** – to provide support right where it's needed.

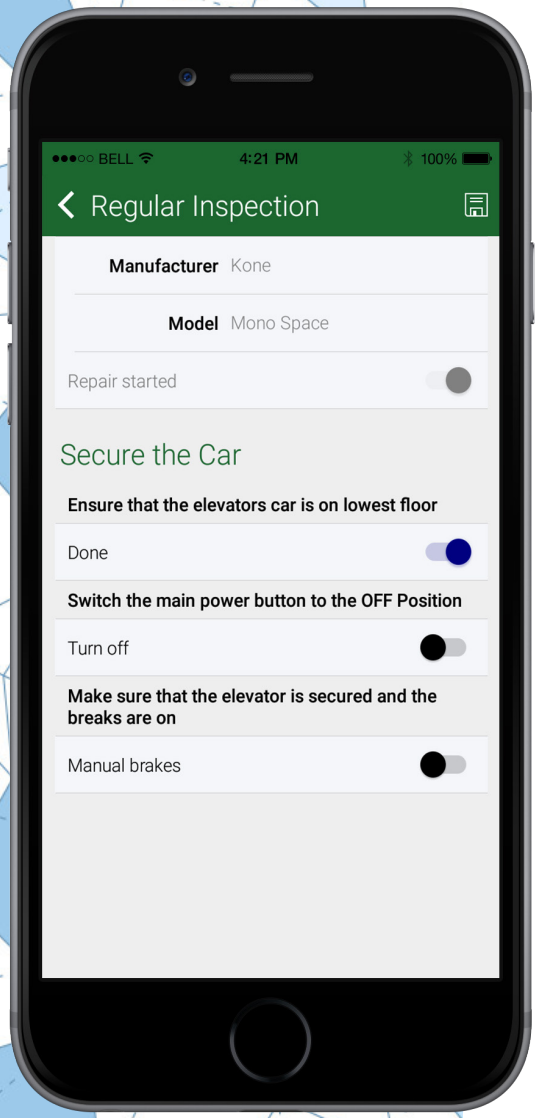
What we have to offer is a completely robust system that will equip any man or woman for the job out in the terrain. No matter the complexity, Resco Inspections will put motions into even the simplest of gears, before tackling more complex inspections processes.



Designer

The Designer is a web-based tool that lets you set up questionnaires and surveys in a streamlined, data-driven UI. It utilizes a per-record architecture, not per-entity, which means users don't have to work with metadata when building questionnaire forms. No system admin access is needed as well, which ensures that entire forms can be built without the risk of accidental change of data schemas.

Ease of use is the primary objective of the Designer. A visual interface lets you create whole forms with minimal number of clicks and drag & drops. The application features a wide variety of questions and question types and allows you to set predefined answers. It also includes custom business logic, which means that thanks to a simple scripting language, the form can be made dynamic and display a different set of questions based on previous answers. If this is not sufficient, a full support of JavaScript and HTML5 is also provided, enabling you to really design your own functionality on top of Resco Inspection forms.

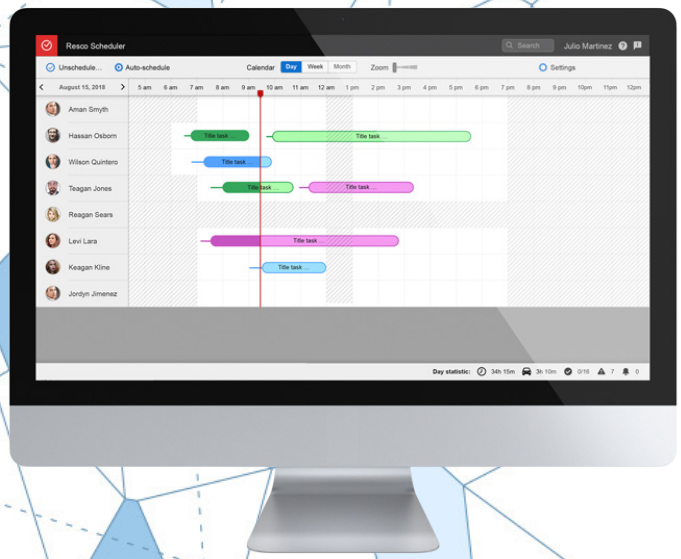


Forms with a purpose

CREATE AN ALL-IN-ONE SOLUTION FOR YOUR FIELD WORKERS

A questionnaire can simply be a list of checkboxes to go through and send to the back office for analysis, and for some scenarios, this is a perfectly sufficient solution. However, with a little thinking outside the box, the forms can be used to optimize the field work even more.

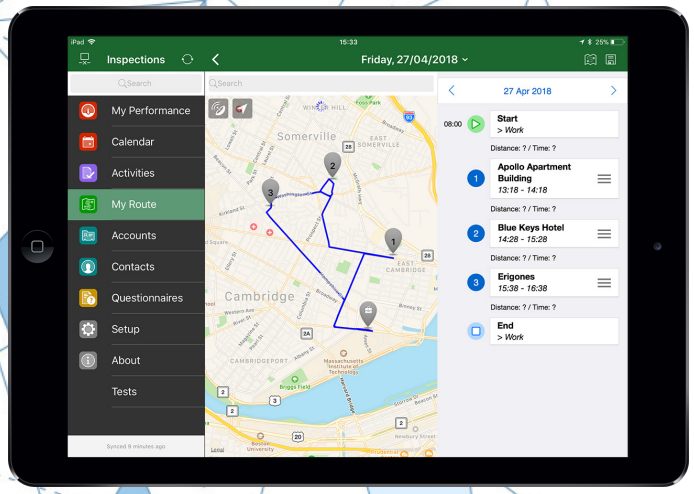
Consider an elevator repairman arriving on site not just to inspect an elevator, but also to detect and fix a problem. The repairman must proceed according to an instruction manual to ensure the success of the operation and possibly their own safety, which can mean carrying around several instruction manuals and inspection forms for different elevator models. However, the Resco Inspections questionnaire can be designed to serve as a step-by-step manual and a checklist at the same time. By implementing business logic in the form design, a specific model can be selected, which will then filter all the relevant information and form questions.



Scheduler

After you have designed your form, it's time to assign it to a specific worker. The Scheduler is an interactive web-based application that allows you to do just that thanks to its drag & drop interface. After you have assigned a questionnaire or a survey to a user, it will appear right in their mobile application.

However, the Scheduler is not just a one-trick pony. It offers team leaders, managers, and supervisors ways to manage their staff in the field. You can see all available questionnaires and information about the tasks, location, and schedule (dates & times) for each team member. The application also notifies you of any exceptional events, like delays or cancelled inspections, and enables you to see how your staff have progressed throughout the day. Based on the latest developments, it can show you an estimate for the near future and predict, if anyone will be finishing sooner than originally expected, so you can task him or her with an additional inspection to help the team.



Inspector

Let's move out of the back office for now and focus on field workers. They will be equipped with a web or native mobile app to guide them through their day. Besides the actual questionnaires, the Inspector is built on two main functional backbones: the Calendar and the Route Planner.

The built-in calendar allows the inspector to see all their tasks and appointments in a calendar view so that they can organize their work freely and in an effective way.

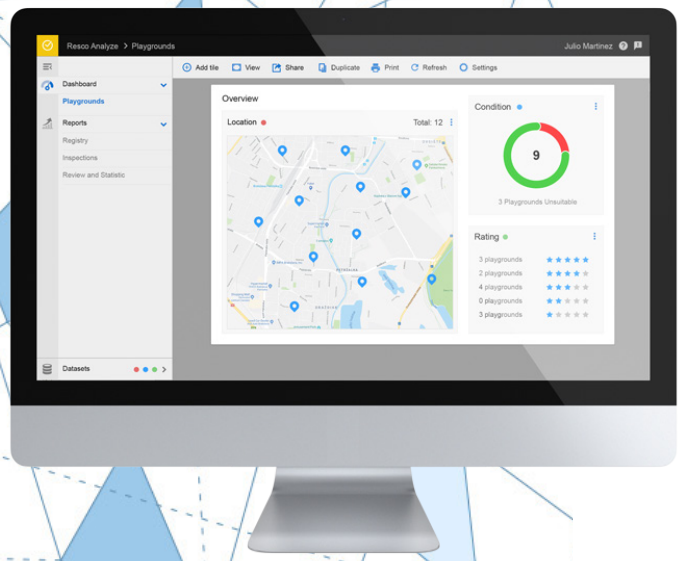
The Route Planner combines the integration with maps and Resco's route optimization functionality and helps users to visit more customers or prospects in one day. After planning the trip, the inspector can open the route directly in Google Maps and be provided with a step-by-step navigation without the need to switch to a different app or device and enter everything in again.

The app also offers the possibility to check-in and check-out to monitor the start and finish of the task. Another handy feature of the system is the mobile audit, allowing managers to see how the inspectors use the app in the field. The insights can then be used to detect possible problems and miscommunications which can be internally discussed and sorted to optimize processes. The company can also capture the GPS location on-site with the inspector to showcase his daily activity, making sure no important customers/sites were missed, keeping things logged and monitored.

In a world where everyone seems to be online all the time, your workers don't have to be.

In this day and age, equipping employees with mobile devices instead of papers seems like an obvious choice that eliminates paperwork and speed up processes. That however, puts a new challenge on the table – how will users access the data? One possibility is to stay online and have the device constantly communicating with the server, but that is not always an option.

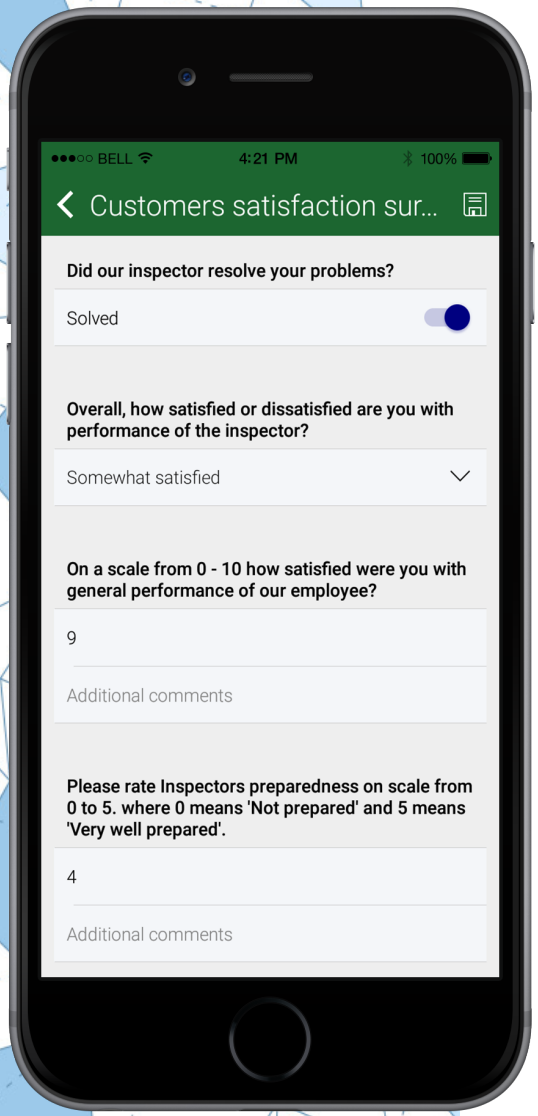
The nature of field tasks forces workers to often spend time in areas with limited connectivity, such as underground parking lots, elevators, offshore work and many more. Offline mobility is essential and therefore, the Inspector is equipped with a fully functioning offline mode – both in the native and the web-based app. The database is stored locally on the device, allowing workers to comfortably work from anywhere and at any time.



Analyst

So far, we have designed the questionnaire and assigned it to a team member, who then performed the inspection, filled out the form, and sent it back to the back office. Since the purpose of the process is not to gather forms just for the sake of having them, the results need to be analyzed and that's where the Analyst comes into play.

This web-based application allows you to see all the collected data either in a form of a report or a dynamic dashboard. You can create different types of charts and reports to really dig through the data and understand what is actually being done. Whether you want to go through the questionnaire answers one-by-one, or need a report with all the essential stats, the Analyst will provide you with the tools to discover the answers you're looking for.



Improving Customer Satisfaction

HOW DO END CUSTOMERS COME INTO PLAY?

Until now, we have only discussed the communication between the back-office and the inspectors, but there is one more group of people that can provide us with valuable feedback and those are our customers.

After the field worker finishes the inspection or maintenance and fills out their questionnaire, they can hand the device running the Inspector app to the customer and ask them to fill out the survey. If this is not a suitable way to collect customer feedback, a web link to the survey can be sent via email as a follow-up later. Either way, this data can provide a new level of insight into the inspection process.

Where & How to get Resco Inspections?

You can get Resco Inspections natively integrated with **Microsoft Dynamics 365/CRM** and **Salesforce**.

Do you have any questions? Contact us for more information or let us prepare a demo for you and see Resco Inspections in action.

Visit website | Request demo | Contact us

resco.net
technology on the move