

Linear Construction Project Planning



Trimble TILOS

# Schedule with Confidence

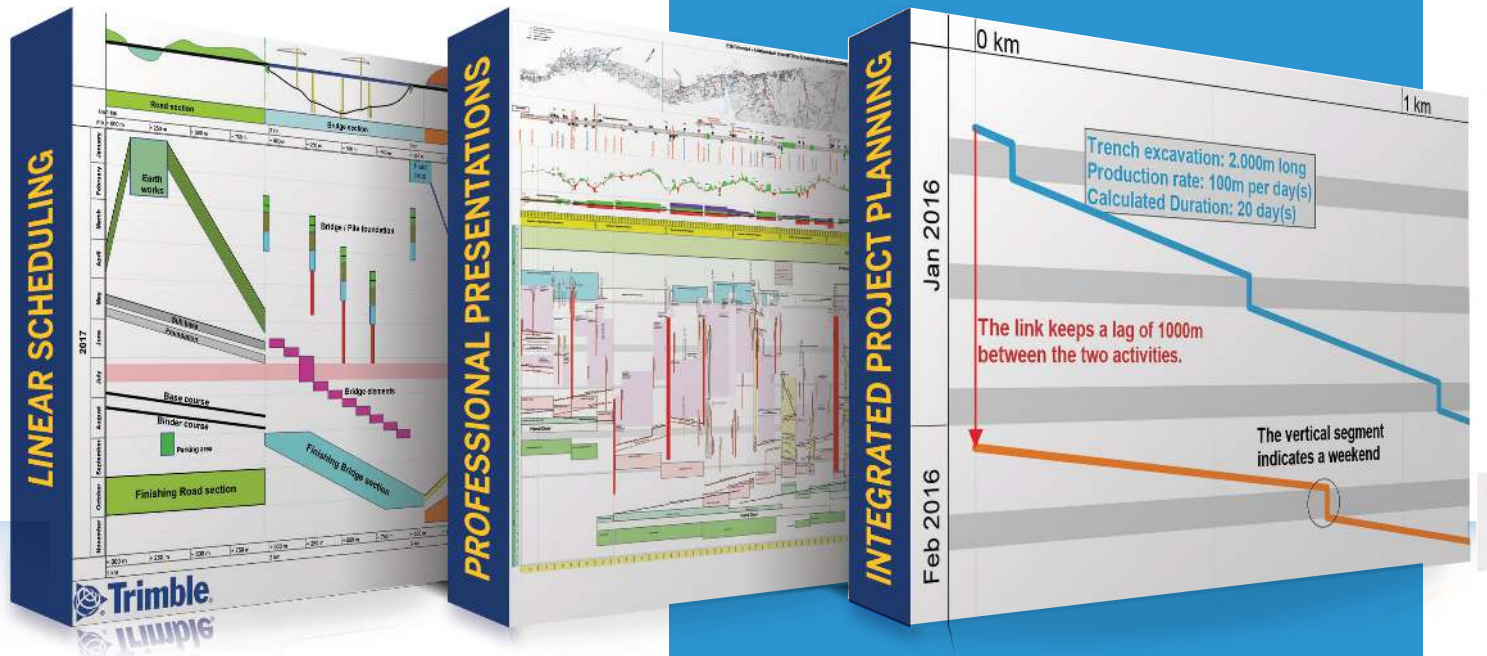
TRANSFORMING THE WAY THE WORLD WORKS



# Schedule

WITH CONFIDENCE

## 5 REASONS to Start Using TILOS Today



Creating linear project plans using traditional Gantt software can be cumbersome and inaccurate. Trimble® TILOS transforms the way linear project plans are created by integrating a scaled diagram of your project with a comprehensive project management system tailored for railway, road, pipeline, tunnel and transmission line projects. Trimble TILOS combines time and location to give you a smarter, easier way to create accurate, optimized plans, and to quickly update these plans as schedule changes occur.

Trimble TILOS can make planning your next project faster and easier:

- ▶ Combine time and location for intuitive, accurate planning designs to visualize location, working direction and productivity
- ▶ Optimize schedules to avoid project clashes and save time and money
- ▶ Integrate spatial data such as CAD, survey and mass haul with project management functionality
- ▶ Create outstanding professional presentations
- ▶ Exchange data with other project planning software packages

### Linear Scheduling

Planning linear construction projects by using time location diagrams and the comprehensive linear scheduling features is highly effective. Deliver optimized and reliable schedules. Communicate your projects effectively.

### Professional Presentations

Present high-quality plans that showcase your talent and give confidence in your ability to deliver. Visualize the whole project on a single summary assist the whole team and the key stakeholders to easily understand the plan.

### An Integrated Project Planning Solution

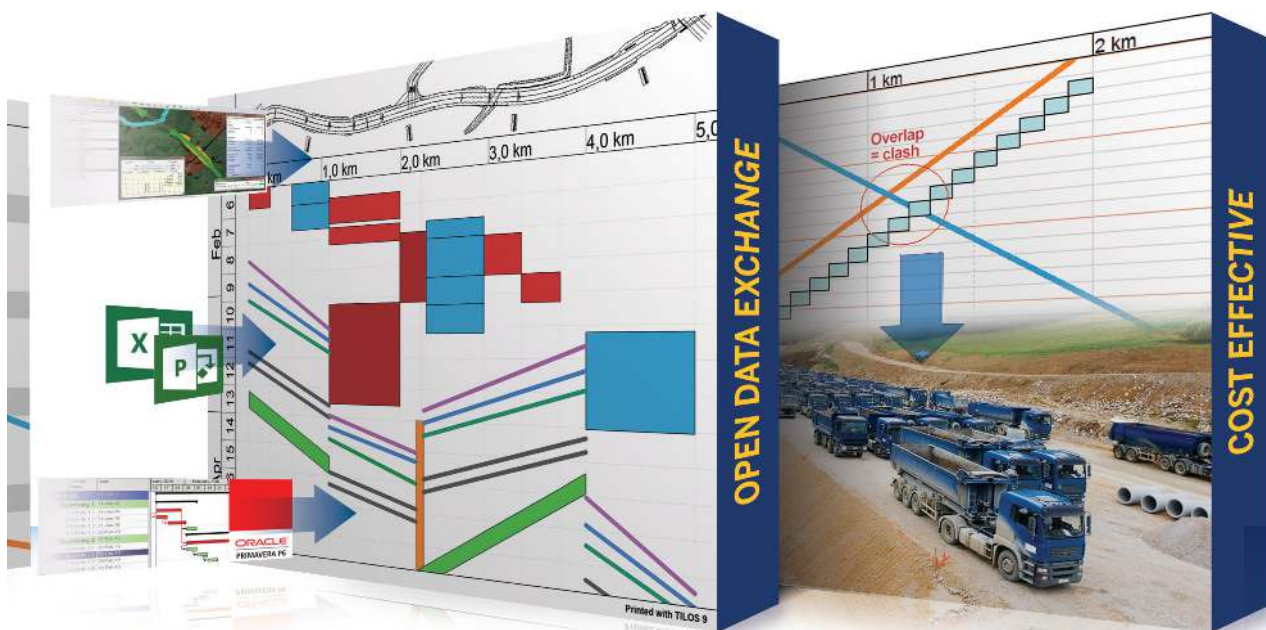
You do the planning using industry-specific planning features, while TILOS calculates the deadlines and the total time required in one integrated system.

### Open Data Exchange

Exchange data with other project management systems such as Primavera P6, Microsoft Project and Asta Powerproject. Import site data such as mass haul, elevation or site map. Insert quantities, equipment and costs from spreadsheet.

### Cost Effective

TILOS quickly pays for itself when compared to other planning methods. Reduced planning time with improved schedule clarity results in more smooth construction sequences and helps to avoid clashes and machine downtime.



## POWERFUL, INTUITIVE SCHEDULING SAVES YOU TIME AND MONEY

- ▶ Create logic links between activities and then update the plan to identify the critical path and project end date
- ▶ Simulate alternative project sequences by changing working times and the location of operations to rapidly find the optimum sequence of operations
- ▶ Draw and calculate activities using real productivity data in a graphical presentation
- ▶ See schedule conflicts immediately on both short and long projects
- ▶ Quick start your planning with industry-specific templates that include prototype tasks, predefined productivity, individual operating time and machine configurations
- ▶ Spatially arrange and coordinate the construction process with 2D scheduling

### TILOS at Work

*"TILOS is being used to coordinate and visualise the construction programmes for Phase 1 of the HS2 project. We import from P6 for 5 geographical areas between London Euston and Birmingham plus the railway systems into a single TILOS plan. The TILOS plan is acknowledged to be a very effective way of assimilating such a massive programme of works."*

**Vernon Pilcher**  
Construction Planner

# Communicate

## PLANS EFFECTIVELY

- ▶ Present and communicate the entire project in one diagram, including graphs and maps
- ▶ Win more contracts, deliver plans more efficiently and justify cause-and-effect delays
- ▶ Ensure that everyone receives the right information at the right time
- ▶ Understand project status and the construction process easily

### EASY-TO-USE GRAPHICAL INTERFACE WITH COMMON CAD ELEMENTS.

**FLEXIBLE VIEWS**  
Create different views of the same schedule – with different level of details or different area of interest (distance or time)

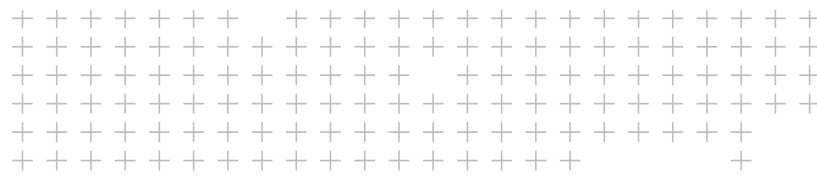
**KEEP A CLEAR PICTURE**  
See The Whole Picture of Earthworks, Road, Rail, Pipeline, Tunnel and Construction Engineering Processes

**SITEMAP AND LOCATION**  
Support your schedule with a site plan to easily understand where the work is done

**ADD DIAGRAMS**  
Add more value and additional planning aspects by visualizing work, resource and cost in diagrams

**ACTIVITY TEMPLATES**  
Quick start your planning with industry specific templates that includes prototype tasks with recognizable appearance, predefined productivity, individual operating time and machine configurations.

**CALCULATE ACTIVITY DURATION**  
Set task productivity to calculate the schedule duration using the quantity of work or the length of the activity.



# CREATE PROFESSIONAL TIME LOCATION PRINTOUTS THAT ARE EASY TO UNDERSTAND FOR THE WHOLE PROJECT TEAM: ON SITE AND IN MANAGEMENT MEETINGS.

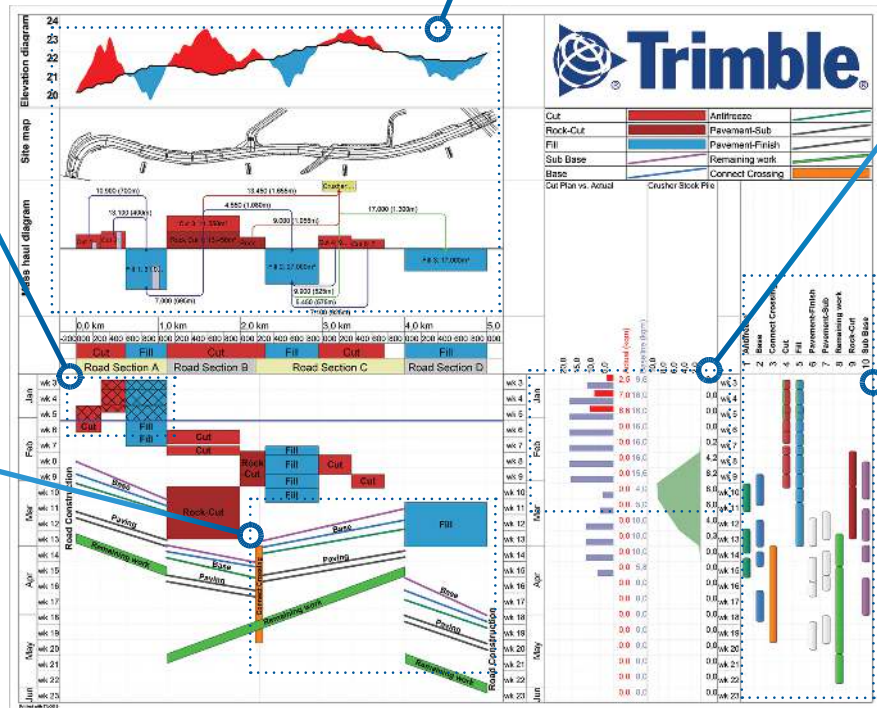
**VISUALIZE WORK COMPLETED**  
Report and visualize completed work to monitor progress and to provide a base for controlling

**VISUALIZE CONSTRUCTION PROCESS**  
Display work location, direction and assigned productivity for each crew / activity on site

**MASS HAUL AND ELEVATION**  
Display Elevation and Mass Haul Information to communicate the essential project processes

**PLANNED VS. ACTUAL**  
Compare planned with as-build data to monitor single processes or crews on site

**DISPLAY GANTT DIAGRAMS**  
Complete the schedule illustration with comprehensive Gantt diagrams





# Dig Deeper

## INTO TRIMBLE TILOS

### SCALED LOCATION CHARTS

- ▶ Use powerful drawing tools to place symbols and objects based on distance coordinates
- ▶ Use a symbol library to easily prepare scheme drawing diagrams
- ▶ Import existing route-diagrams directly into the chart and scale them to size automatically
- ▶ One chart has everything you need:
  - Split the chart into multiple sections so you can display more information
  - Clearly show the different stages of construction
  - Include detailed drawings with site plans
  - Show resource usage (plant, people and materials)

### RESOURCE AND COST PLANNING

- ▶ Reduce risk by integrating cost, quantity and performance planning
- ▶ Calculate activity duration from the working speed (performance) and the distance or from work quantity and performance
- ▶ Calculate resource utilization using quantities or time with flexible calculation models
- ▶ Create quantity and cost charts to show time-specific and absolute resource requirements over the duration of a project
- ▶ Compare costs and income to show project profit
- ▶ Compare values with a project baseline or use other project profiles
- ▶ Calculate costs based on resource usage

### CUSTOMIZABLE VIEWS

- ▶ Define project, scale, site plan and chart areas, and use them to create customizable project views showing common data in different ways
- ▶ Set axis orientation and direction individually for each cell
- ▶ Integrate Gantt diagrams, time and location diagrams, cost and resource diagrams, and spatial information to one comprehensive chart

### MASS HAUL DATA AND DIAGRAMS

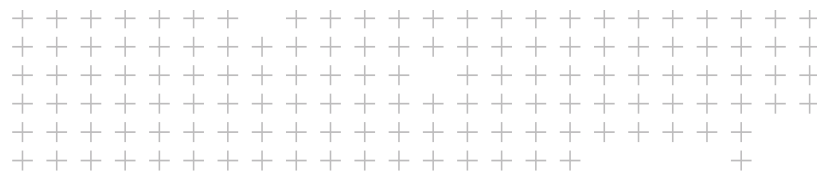
- ▶ Create different types of material such as cut, fill and disposal
- ▶ Enter or import different cut/fill locations and quantities
- ▶ Dictate where the cut from one area goes to fill another
- ▶ Create tasks based on quantity and productivity for each cut/fill movement to quickly build a schedule
- ▶ Display consumption graphs based on location or time

### PROGRESS TRACKING

- ▶ Update projects regularly and constantly monitor actual progress against the original plan
- ▶ Define the report date to progress activity
- ▶ Progress activities by where they have been done and not just by time. Enter a distance achieved, a quantity achieved or a % achieved.
- ▶ Baseline and compare the original plan to current project progress to detect variances immediately and compensate for them in real-time.
- ▶ Instantly update the current project status and calculate new deadlines with reference to the reporting date
- ▶ Calculate earned value measures for activities and sub-projects
- ▶ Import and export progress and the actual data via a spreadsheet
- ▶ Display distance progress as a distance Gantt chart

### CONNECTED SOFTWARE

- ▶ Exchange data with:
  - Business Center - HCE by Trimble
  - Oracle® Primavera® P6
  - Microsoft® Office Project
  - Asta Powerproject®
  - Spreadsheet programs



## TILOS USAGE IN PROJECT LIFECYCLE

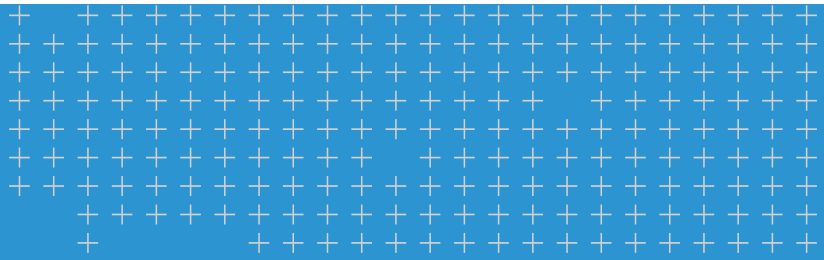


*"TILOS transformed our engineers' attitude toward project scheduling from something extra they never had time for to a tool they "owned" and wouldn't go to a meeting without."*

**James Lyon**  
HDR Inc. USA

*"Awesome piece of software with many applications in the job."*

**Stuart Shortland**  
Parsons Brinkeroff Ltd, UK



# Trimble: Transforming the Way the World Works

Trimble provides the tools and support to let you integrate planning, design, site positioning, machine control and asset management information throughout the construction life cycle for more efficient operations and higher profits. Contact Trimble or your local dealer today to learn how easy it is to utilize technology that makes significant improvements in project workflow, dramatically increases your production, improves your accuracy and lowers your operating costs.

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