



Large Multi-site Companies

Possible project objectives

- Productivity improvements:

How MT can fulfill these objectives

- Increase truck processing time / higher throughput
- Reduce inventory shrink (missing material)
- Simplify traffic flow through operations

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- Cost reductions, waste avoidance:

- Eliminate / reduce manned scale house operators
- Automate bulk material receiving / shipping
- Lower unplanned failures, lower maintenance repairs

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- Increased quality and accuracy

- Eliminate over-filling and re-adjusting loads
- Trending and monitoring long-term scale accuracy

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- Regulatory compliance: (internal audit & external regulations)

- Insure transaction accuracy at point-of-sale
- Reduce inventory shrink

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- Eliminate operational risks: (Safety, liability, systemic theft)

- Automate traffic control, keep drivers in trucks
- Implement anti-cheating system measures

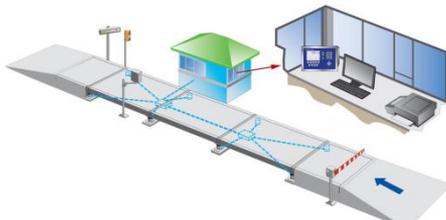
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- Lower project costs / Acquisition cost:

- Size the weighbridge to the traffic volume
- Downgrade sensor technology
- Support customer supported project management

Baseline Questions

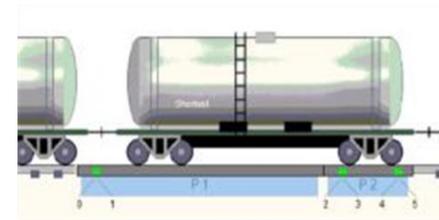
Static Truck Scale System:

- Is this a new scale installation or replacing an existing scale?
 - If existing, do you wish to use the existing foundation?
- What are the maximum length trucks you need to weigh? What types and configurations?
- Gross weighing or axle weighing?
- What is the peak volume of trucks weighed per day? What is the typical volume?
- Will trucks primarily have legal, over-the-road, gross weights – estimate % overloaded?
- Do you intend use 2-pass weighing (empty / full or full / empty)?
- Is there a preference for concrete or steel deck drive surface?
- Where do you want to go with your weight information? Printed, displayed, connected to control system or business system?



Static Rail Scale System:

- New scale installation or replacing an existing scale?
- What is your longest car (outside wheel to outside wheel) and shortest car (inside-to-inside)?
- Are you filling on the scale or checking weights only?
- What is the rail size?
- How will the typical operation work?
 - pulling cars onto scale, coupled / uncoupled, single or dual draft?
- Where do you want to go with your weight information?
 - Printed, displayed, connected to control system or business system?



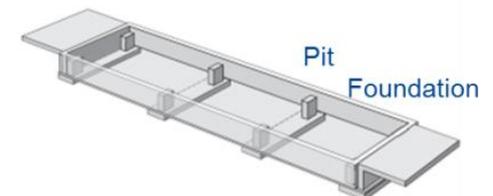
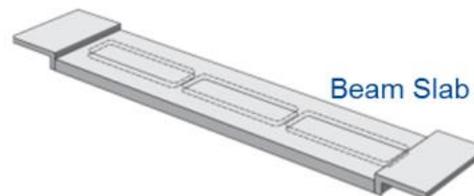
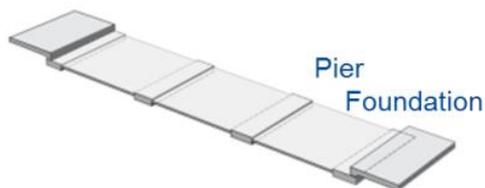
Project Management / Foundations / Construction

Understanding the Needs & Wants:

- Do you prefer above-ground or in-ground foundation types?
- If using existing foundation, are building scale to fit existing piers or modifying foundation to match MT prints?
- Do you have soil bearing test analysis for your site / operation?
- How would you propose to handle drainage away from the foundation?
- Drawing requirements?

Defining System Responsibilities:

<u>Scope</u>	<u>Mettler Toledo</u>	<u>User / Customer</u>	<u>Engr. Firm</u>	<u>Other</u>
Site Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foundation / Construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crane Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrical / Mechanical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commissioning / Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disposal (existing scale)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Foundation / Construction Basics

If:

- Is it a virgin construction site or appears to be built up fill (landfill)

- Are there overhead power lines?

- Are there building foundations close to planned foundation?

- Do they want to use an existing foundation?

- Is there bodies of water nearby?

- Will the foundation be at a high point or low point of the area?

- Is there existing asphalt or concrete surface?

Then:

- Virgin land less likely to have underground issues (pipes, power), landfill likely to have soil bearing issues

- May be an issue with installation crane

- Could cause issues with proper foundation construction

- May require special weighbridge to meet existing pier locations

- May mean high water table, cause problem for gravity drainage away from foundation

- Prefer foundation to be high point for gravity drainage away from scale

- Assume 100 – 150mm thickness and no reinforcing, saw cut piers (above ground) use existing surface for washout slab

Receiving / Gate Systems

Understanding the Needs & Wants:

- Manned scale house or unattended (unmanned) system?
- Are the trucks your own fleet, outside haulers, or both?
- Do you plan to use stored truck tares or 2 pass weighing?
- Multiple materials being received?
- Are you grading or classifying inbound material?
- Is fraud, security, or theft issues a concern?
- Do you want us to provide traffic control systems like: driver scoreboards, traffic lights, gates?
- Hard copy tickets, simple strip printing of net weights?
- Do you need separate scale controls for after-hours? At security shack?

Common Customer Questions:

- How often do I have to get scale calibrated?
 - Do I have to weigh-in and weigh-out at the same scale?
 - Is the scale bi-directional?
 - Can the in-bound operations be monitored from a central location?
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My Consultative Questions:

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Shipping / Load-out Systems

Understanding the Needs & Wants:

- Filling trucks on the scale or prior to final weighment?
- Filling by volume or based on weight?
 - Is fill control and valve shut-off controlled by a PLC or by the scale control?
 - Who is your PLC standard?
 - Will you have multiple product fill spouts over each scale?
- Is this custody transfer of material requiring **legal-for-trade** scales?
- Do you want a printed weight summary for the driver?
- Is the weight transaction tied to your business system?

Common Customer Questions:

- I need images of the trailer seal, trailer bed, final load. Can you capture the images with the transaction?

My Consultative Questions:

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Scale House / Custody Transfer

Understanding the Needs & Wants:

- Do you have a current point-of-sale business system we need to connect to or should we propose a software solution?
- How many users and locations will operate the POS system?
 - Scale house – separate in-bound and out-bound operators?
 - After hours security / guard shack?
 - Will you have supervisory users or accounting to manage transaction information?
- Do you want to start with a single PC, stand-alone application or networked multi-PC system?
- Other?

What are the most important POS data you want captured with each transaction:

- Material type
- Material grade
- Price
- Truck weight (tare)
- Net weight
- Customer name
- Account number
- Purchase contract
- 3rd party hauler
- Driver ID
- Truck ID
- Surcharges, fees
- Taxes
- Material origin
- Other?

Bulk Food / Agriculture

Understanding the Needs & Wants:

- How long is your harvest season? Or continuous operations?
- What are the peak trucks per day?
- Do you have sampling systems at the scale receiving system?
(grading, grain quality, moisture analysis)
- Are you considering grain-dump or dump-through receiving scales?
- How do you identify inbound drivers, trucks, materials?
- What is your target processing time per truck?
- Do you have training plans for seasonal operators?
- How many load cells are you typically replacing per year? Lightning?, flooding, rodents?

Common Customer Questions:

- How flexible is the software for changes to prices, commodity, driver entries, vehicles?
- Do you have anti-theft and cheating systems?

My Consultative Questions:

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Bulk Chemical

Understanding the Needs & Wants:

- What are the materials we're handling?
Considered explosive, caustics?
- What is the material?
- Requires special paint finishes?
- Is the area considered zone 1 or zone 2 hazardous?
- Confined space issues, special clean-out procedures?
- Is there filling or draining of chemicals while on the scale?

Common Customer Questions:

- Do you have a 4-20mA output?

My Consultative Questions:

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Aggregate

Understanding the Needs & Wants:

- How long is your construction season?
- What are the peak trucks per day?
- Does the scale need to be portable or moveable?
- What material types are you running?
Classifying at the scale?
- Are you running any off road haulers? What are the truck types?
- Are the trucks your own fleet, outside haulers, or both?
- How many load cells are you typically replacing per year? Due to lightning, flooding?

Common Customer Questions:

- We need to sometimes run our CAT, Komatsu, Volvo off-highway vehicles across the scale – is your weighbridge capable?
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My Consultative Questions:

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Waste / Recycling

Understanding the Needs & Wants:

- What are the peak trucks per day?
- Are you grading / classifying the material or truck type at the scale?
- Commercial, residential or both customers?
- Charging by volume and by weight?
- Are the scales for:
 - Landfill
 - Transfer station
 - Tunnel scale
 - Recycling center

Common Customer Questions:

- We need an automated self-payment system for weekend, after-hours operation. Do you have a solution?
 - We have problems with rodents chewing through electrical cabling, do you have special protections?
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My Consultative Questions:

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