



# Customer Case Studies

## Urea

### RAM Revolver

*RAM 4111 for Ship To Shore Cranes*



## Customer Challenge

With fertilizers in high demand, RAM Spreaders' customer wanted to export their urea to a wider global market. The customer's dedicated terminal is ideal for accommodating small bulk carrier vessels to export to regional ports but falls short of accommodating large bulk carrier vessels to export to overseas markets.

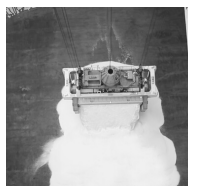
## Our Solution

We worked with the customer, and a regional port and Intermodal Solutions Group (ISG) to export the urea with a containerised bulk handling operation. In short, the operation involves urea being loaded into ISG sealed containers before being unloaded via 2 RAM Revolvers on the ship to shore cranes at the container port. The containerised solution has allowed the customer to export their urea to a wider market of customers with little planning, investment and without compromising the quality of their commodity.



## Operation Details

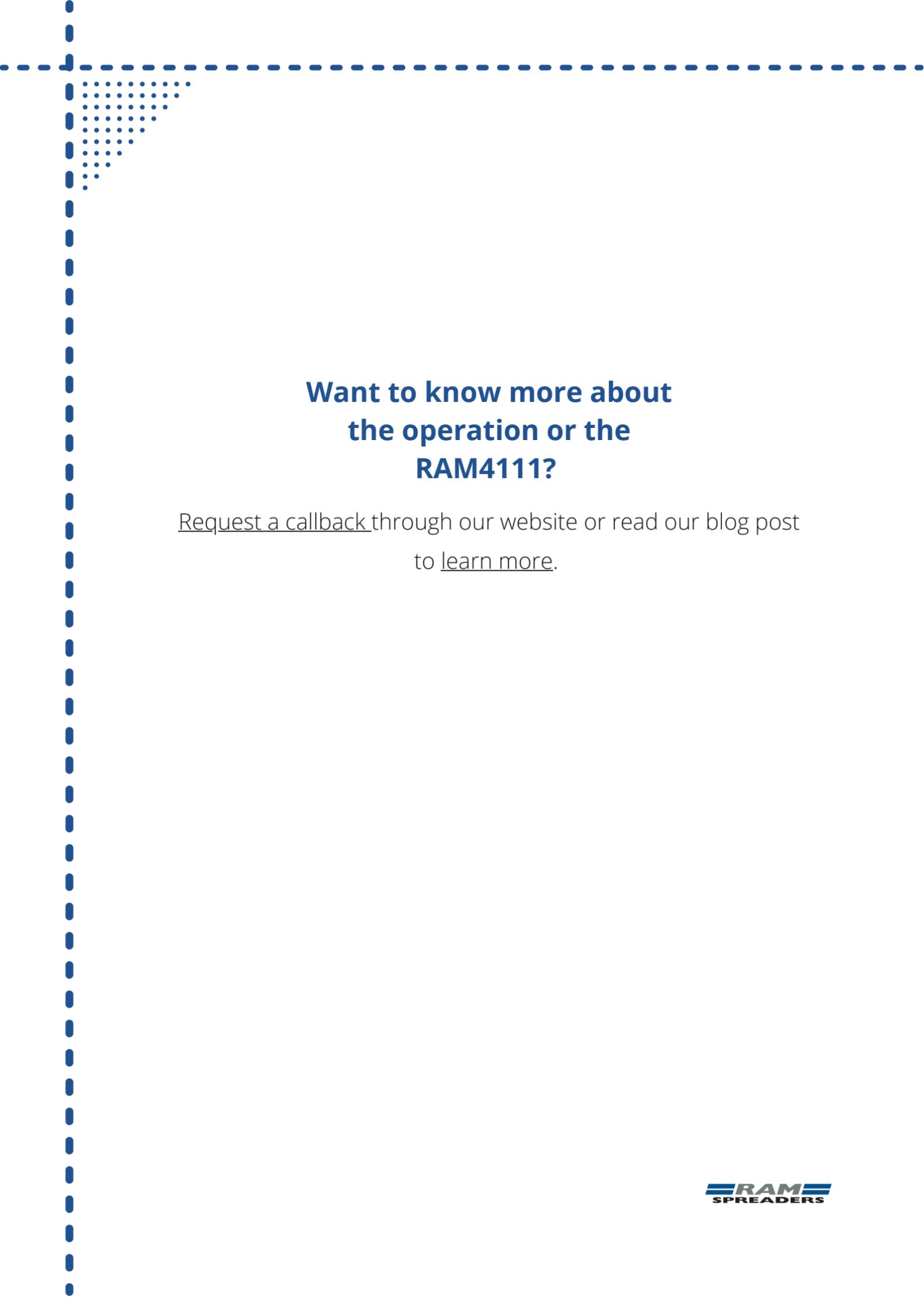
- Containers are loaded at the customer's urea plant using a hopper and feed. The feed is placed into sealed containers via the purposely built hatch.
- Containers are then transported to the container port.
- Containers are removed from the truck by a reach stacker and stacked in the yard for the arrival of the bulk carrier vessel.
- When the vessel arrives, two sealed containers are placed onto the truck by a reach stacker and transported to the quayside.
- At the quayside, two RAM Revolvers on ship to shore cranes work in unison, removing the containers from the truck.
- When moving towards the hatch, the RAM Revolver removes the sealed container lid in a semi-autonomous process.
- The containers are then lowered into the hatch and rotated 360 degrees to fully expel the urea.
- The lid is then replaced back onto the container and replaced onto the truck.
- This cycle is then repeated



## Project Highlights

- 100% of the urea is unloaded into the hatch
- The urea is not contaminated due to it being sealed in the containers
- The customer was able to export to a global market
- Utilised the storage space at the container port
- Required little planning to set up the project
- Required little investment when compared to conventional bulk handling infrastructure
- Dust is not generated once during the handling and unloading of the containers





**Want to know more about  
the operation or the  
RAM4111?**

[Request a callback](#) through our website or read our blog post  
to [learn more](#).