

Port Related Landside Infrastructure Planning

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- Independent consultant specialising in freight and urban transport planning since 2008.
- Ex – Westrail/Public Transport Authority and local government engineer.
- Relevant experience for this presentation
 - Landside infrastructure planning
 - Intermodal terminal planning
 - Leasing negotiations for operational sites.

Items to be covered

- **What is the Objective – Economic Development or Freight Movement?**
- **Flexibility in long term planning**
- **Lessons from Forrestfield and Kewdale from early planning to the present**

Also:

- Simple description of the Landside Supply Chain elements
- The key role played by stevedore terminals
- Operational Relationships

Container Supply Chain

- Container description and movement.
- Empty Container Parks.
- The complexity of the Container Supply Chain.
- Intermodal Terminals and Road Transport Depots.
- Land Use Planning and Infrastructure Development.

Containers

- Are owned by shipping lines
- Come in different lengths and heights
- Are set up for different products (food grade, reefer, dry storage, open top and various door locations).
- Therefore limited opportunities for easy reallocation from import to export use.
- Supply chain and infrastructure solutions needed.

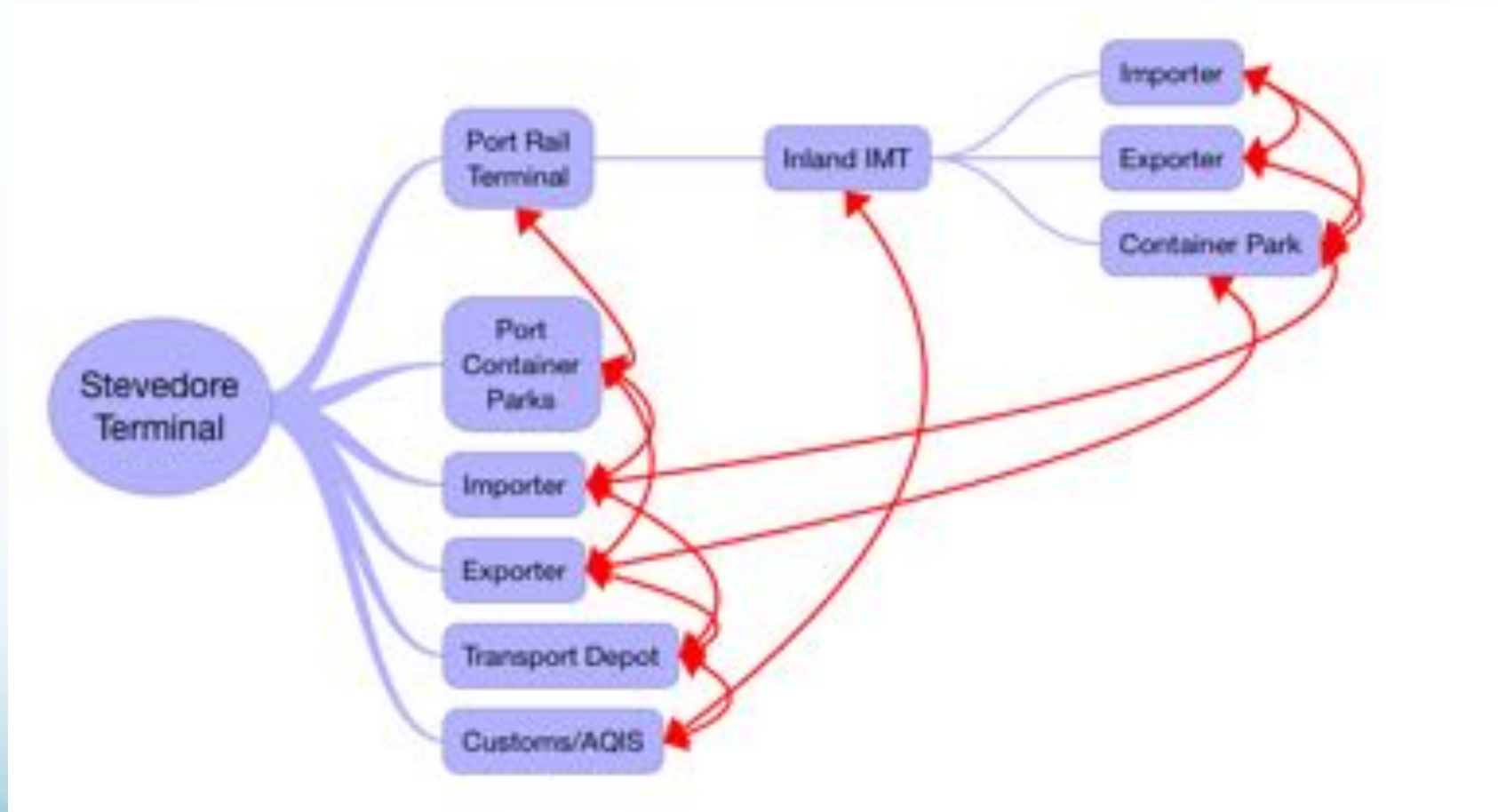
Container Movement

1. Import Movement: Full to importer, empty to Empty Container Park (ECP) for transfer to exporter.
2. ECP: Receives empty (dehire) from importer (inspects, repairs and cleans) then allocates to exporter or relocates overseas via transfer to Terminal (Bulk runs).
3. Triangulation (rare movement) –importer transfers empty direct to exporter.
4. Export Movement: Full from exporter, overseas relocation of empty from ECP.

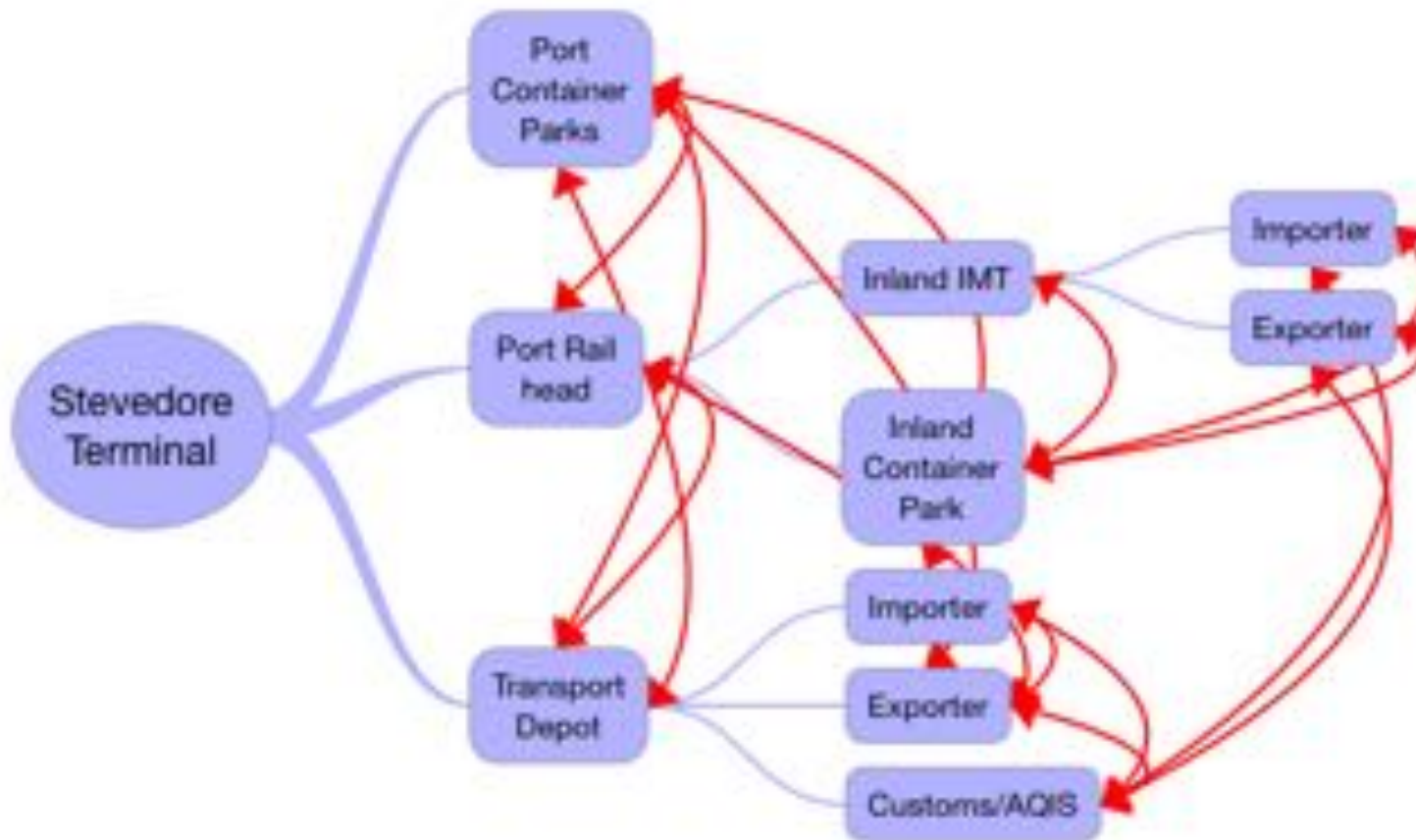
Empty Container Parks

- Contracted by shipping lines.
- Not just for storage because they:
 - ❖ Coordinate movement of the various container types mostly for import dehire and reassignment to exporter.
 - ❖ Relocate excess empties overseas.
 - ❖ Survey, clean and repair containers on behalf of shipping lines.

Container Supply Chain (1)



Container Supply Chain (2)



Supply Chain Restrictions

- Stevedores must clear their Terminal decks to keep servicing vessels due to the limited window to unload and load.
- Competition for Terminal slots due to restrictions on the time containers can be held on site.
- Time limit for importers to return import boxes to ECP's.
- Difficult to coordinate time of Terminal (1Stop) and ECP (ContainerChain) slot bookings – to reduce empty truck running.

Benefits of Inland Intermodal Terminals and Road Depot's

Relieves pressure on Port by:

- Providing off Port full container storage.
- Being open outside of normal business hours to allow extended port operating times.
- Providing large sites for rail and efficient large capacity trucks operating from the Port.
- Allowing transfer to trucks that can unload at small importer sites (small table top or sidelifter)
- Association with a local (inland) ECP.

Planning for Infrastructure

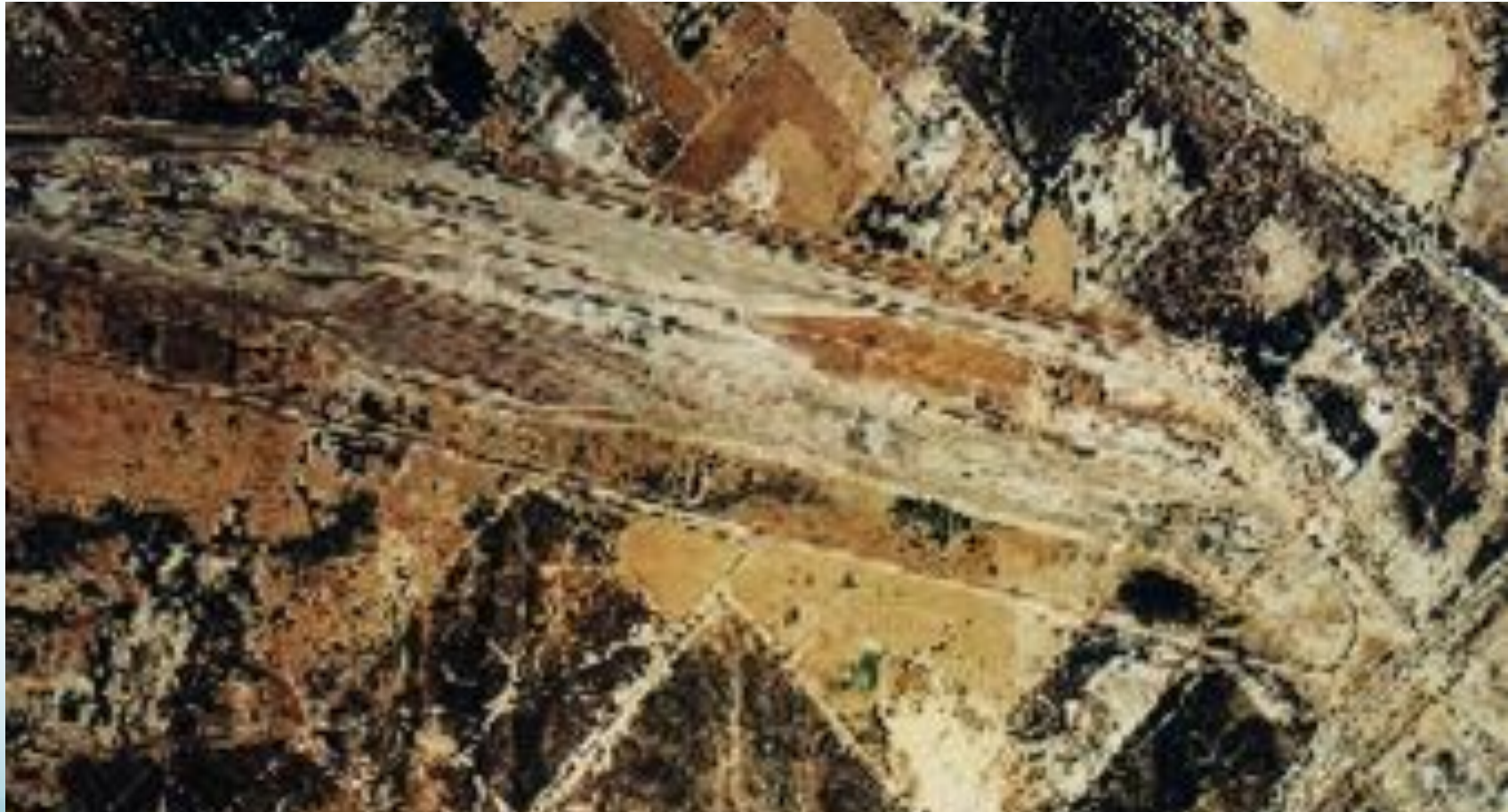
Land use planning for the Supply Chain must:

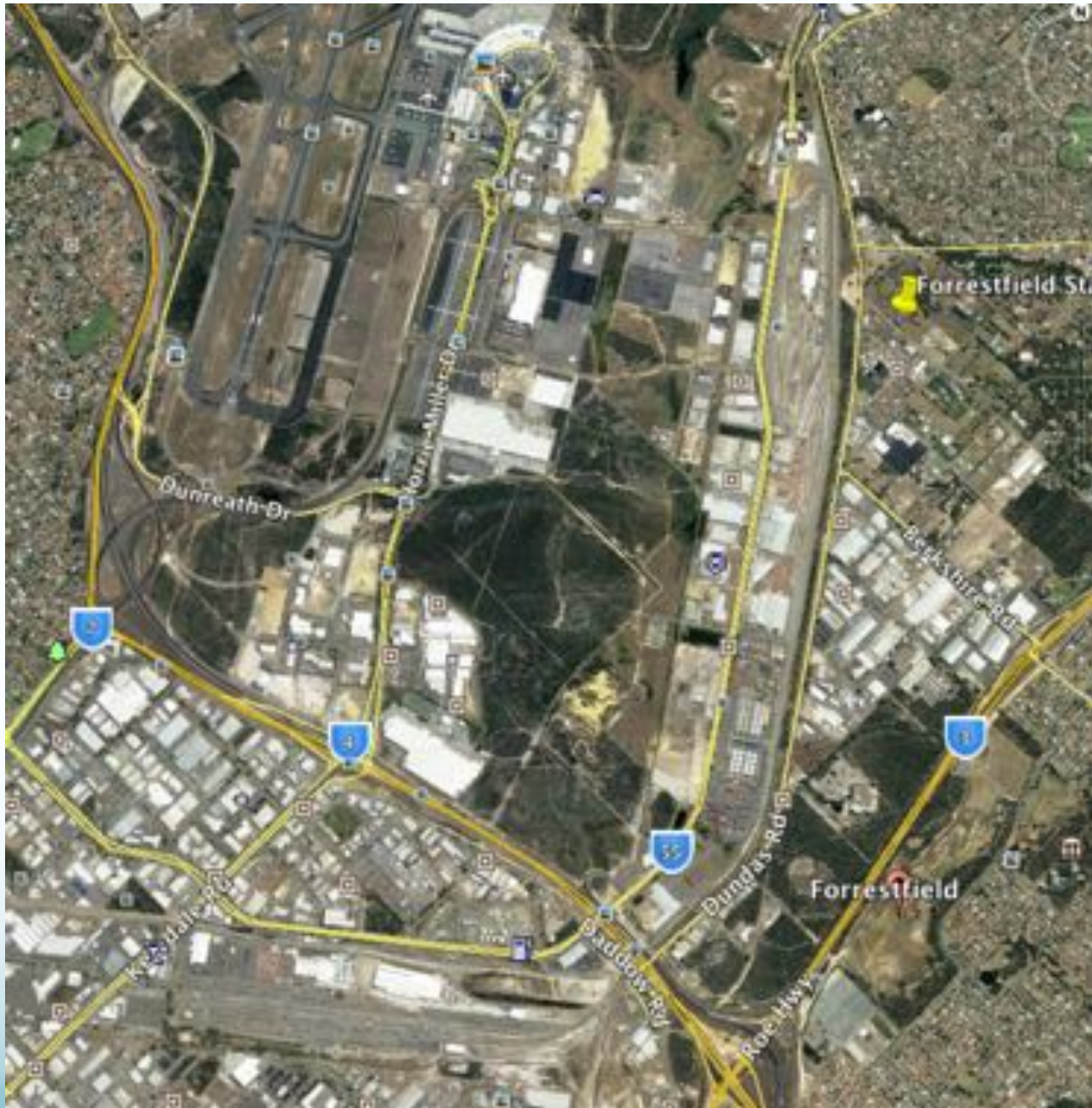
- Have an understanding of Supply Chain operations.
- Facilitate efficient operations including how to provide end of line rail facilities; at the Port and inland.
- Create suitable lots in the right locations (structure plan design).
- Identify and protect transport corridors.

History of Forrestfield and Kewdale

- Planned in the 1960's as part of the project to bring standard gauge rail to Western Australia.
- Included a new urban freight rail system independent of the urban system.
- Terminals were designed for the 'regulated' rail network – all country town freight carried by rail.
- Deregulation decision in mid 1970's coincidental with containerised freight revolution.
- WAGR management decided to act as if deregulation was already in place.

1975 Forrestfield





2014 Forrestfield





Kewdale IMT from 1975 to 2014

- Changed from a less than vanload operation to a fully containerised IMT.
- Changed to a private operation (avoided the cycle of doom).
- The current Kewdale Terminal is a long term lease.
- Substantial increase in rail modal share.
- Accommodates a small freight village which is currently Australian best practice.

Kewdale Interstate IMT



Kewdale Freight Village







Lessons

- Privately run freight operations are very dynamic – substantial change can occur quickly.
- State and local government are best placed to provide the basic services and land and the private sector are best placed to use that land to maximise operational creativity and effectiveness.
- The key is provision and protection of land to accommodate the development opportunities that will occur over time.