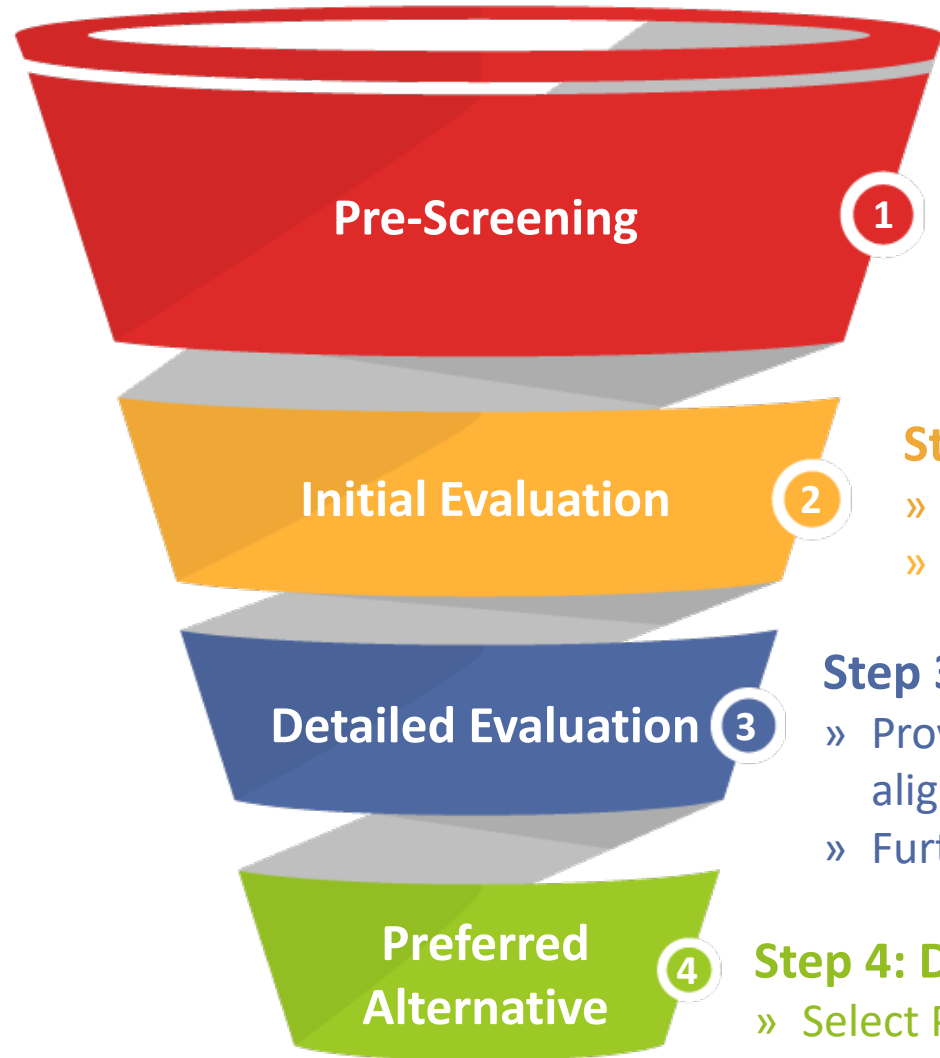


Alternatives Evaluation Roadmap



Step 1: Fatal flaw review

- » Review full range of corridors and modes
 - Does the corridor or mode meet the Purpose & Need?
 - Is there an obvious fatal flaw?
 - Reduce corridors and modes based on pre-screening

Step 2: Evaluate alternatives at a high-level

- » Combine remaining corridors/modes into logical alternatives
- » Reduce alternatives based on initial evaluation

Step 3: Evaluate alternatives in more detail

- » Provide greater definition (identify service assumptions, stations, alignment details)
- » Further narrowing of alternatives

Step 4: Develop Implementation Plan

- » Select Preferred Alternative
- » Consider potential phasing options



1 Full Range Corridors + Modes

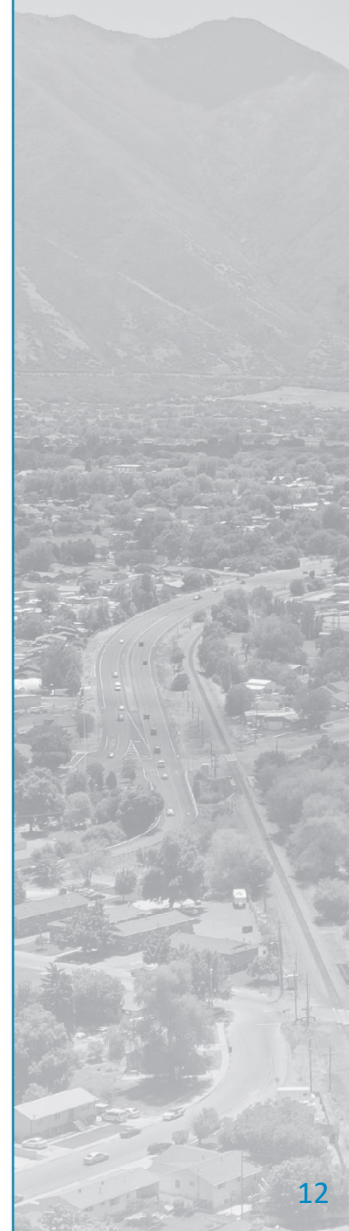


Corridors

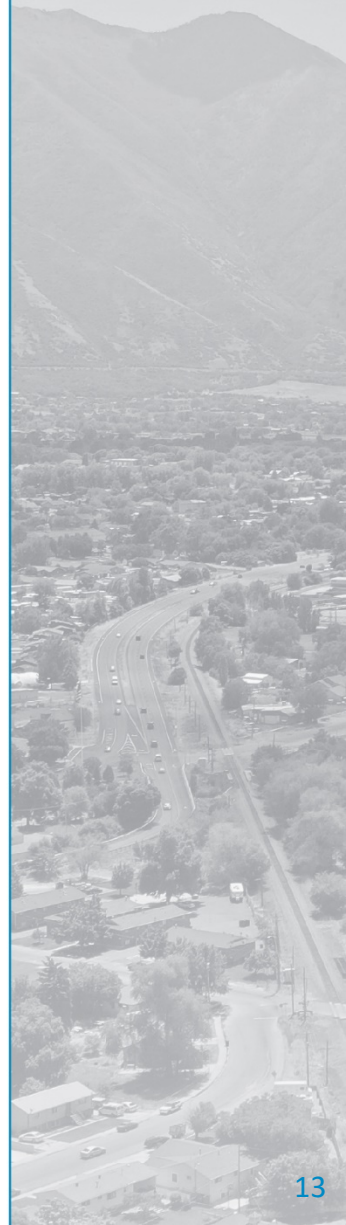
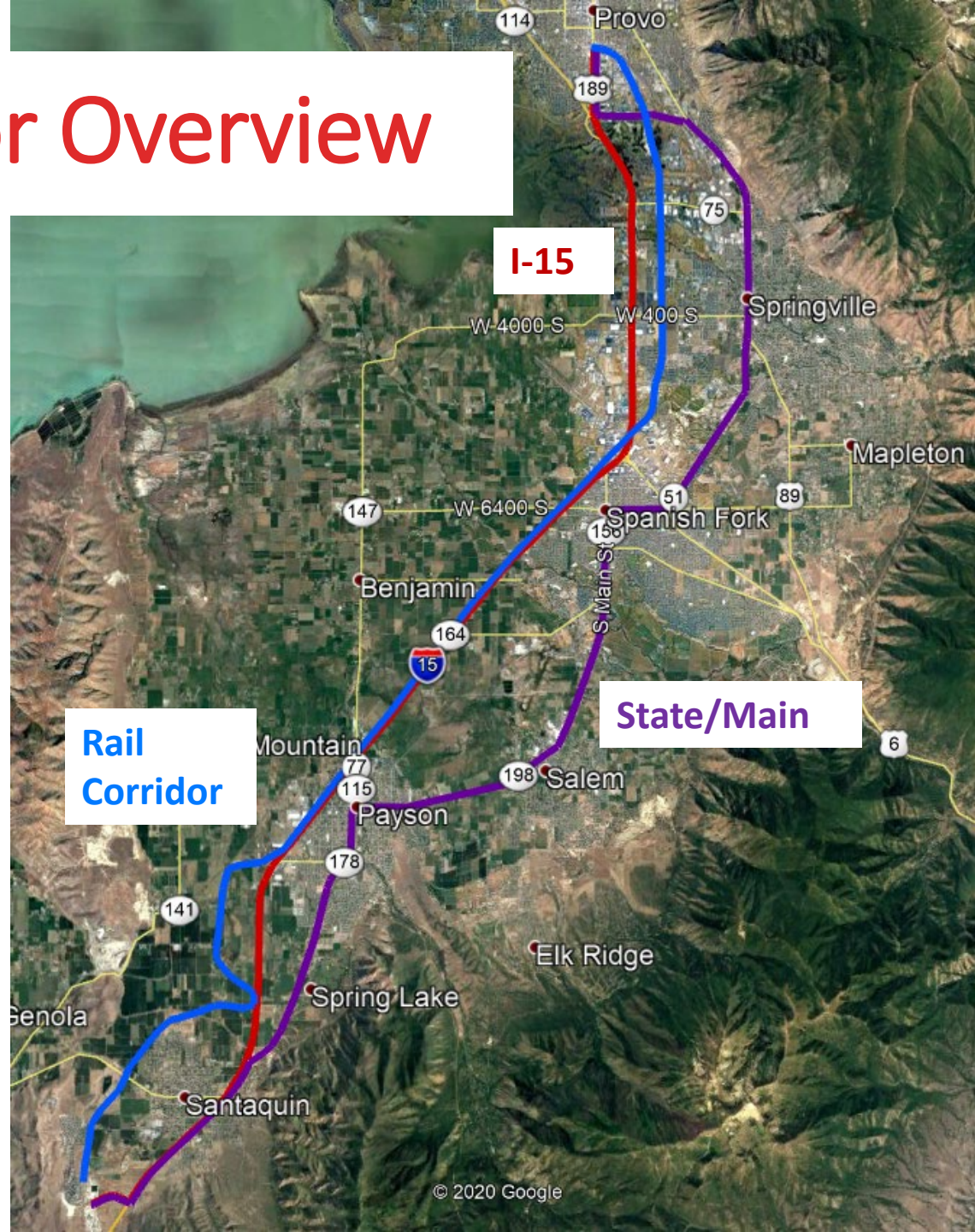
- » State/Main Street
 - Multiple options for north and south terminus, will select a representative alignment
- » Rail Corridor
- » I-15
- » Missing anything?

Modes

- » Commuter Rail (exclusive guideway)
- » Light Rail (exclusive guideway)
- » Bus Rapid Transit (BRT) (exclusive guideway)
- » Local bus service (mixed flow)
- » Express bus service (mixed flow)
- » Missing anything?








Transit Corridor Overview



Transit Mode Overview



	BUS RAPID TRANSIT	LIGHT RAIL TRANSIT	COMMUTER RAIL TRANSIT	EXPRESS BUS	LOCAL BUS
Trip Types	Local and regional	Local and regional	Regional	Regional	Local
Operating Environment	Exclusive right-of-way or mixed traffic along arterial streets or highways ^a	Exclusive right-of-way within arterial streets or in dedicated right-of-way separate from streets	Separate right-of-way	Utilizes existing travel lanes, often on interstates mixes with general traffic	Utilizes existing local streets, mixes with general traffic
Typical Spacing of Stops	1/2 - 1 mile	1 mile	4-5 miles	Varies, but tends to have longer stop spacing (>1 mile)	1/4 mile
Typical Peak Frequencies	5-10 minutes	15 minutes	30 minutes	30 minutes during AM/PM peak, little or none outside of that	15-30 minutes
Passenger Capacity per Vehicle	60-90 per bus	180-200 per car ^b	100-200 per car ^b	60-90 per bus	40-80 per bus
UTA Example	 UVX	 TRAX	 FrontRunner	 Route 805	 Route 822

^a - BRT has the greatest flexibility in operating environment. In addition to functioning in a typical street environment, it can also operate along highways, including in high-occupancy vehicle (HOV) lanes.

^b - Multiple LRT and CRT vehicles can be linked to create a longer train, moving a higher capacity of passengers per trip.



1

Pre-Screening Step

Does it meet Purpose & Need or is there a fatal flaw?



Corridors

- » State/Main Street
 - *May not obviously meet P&N but should evaluate*
- » Rail Corridor
- » I-15

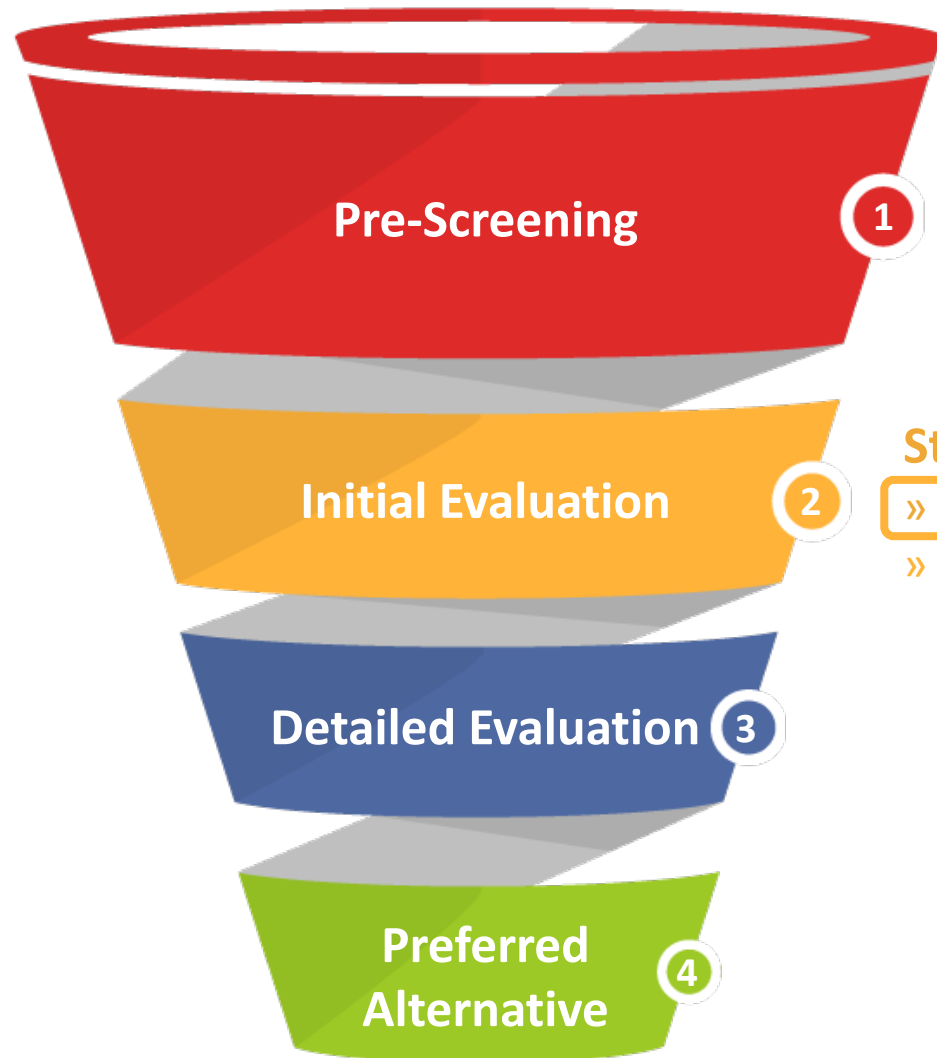
Modes

- » Commuter Rail (exclusive guideway)
- » Light Rail (exclusive guideway)
 - *Likely meets P&N but need to show tradeoffs*
- » BRT (exclusive guideway)
- ~~» Local bus service (mixed flow)~~
 - *Does NOT meet P&N**
- » Express bus service (mixed flow)

Discussion: Did we eliminate the correct corridors and modes?
Are there others to screen?

*By eliminating this mode does not preclude provision of local bus to serve the larger capital investment or making other service improvements

Alternatives Evaluation Roadmap



Step 2: Evaluate alternatives at a high-level

- » Combine remaining corridors/modes into logical alternatives
- » Reduce alternatives based on initial evaluation – *future step*



2

Combining Corridors + Modes into Logical Alternatives

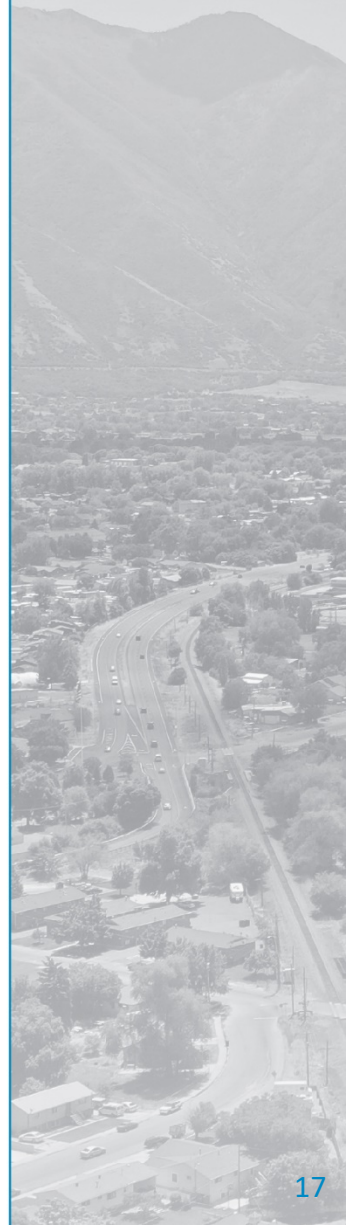


Mode	Definition	State/ Main	Rail Corridor	I-15
Commuter Rail	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment Regional service with longer stop spacing 	No	Yes	No
Light Rail	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment (shoulder-running/median on I-15 or State/Main; rail corridor ROW) Regional service with longer stop spacing 	Yes	Yes	Yes
Bus Rapid Transit	<ul style="list-style-type: none"> Operates in <u>exclusive</u> transit alignment (shoulder-running/median on I-15 or State/Main; rail corridor ROW) Regional service with longer stop spacing 	Yes	Yes	Yes
Express Bus	<ul style="list-style-type: none"> Operates in mixed flow traffic Regional service with longer stop spacing 	Yes	No	Yes

Discussion: Are these YES responses the correct alternatives to evaluate in Level 1?

Notes:

- Alternatives represent full buildout (2050) and service from Provo to Santaquin
- Frequency of service would be the same for all alternatives



2 Initial Evaluation – how to decide?



➤ Potential evaluation criteria:

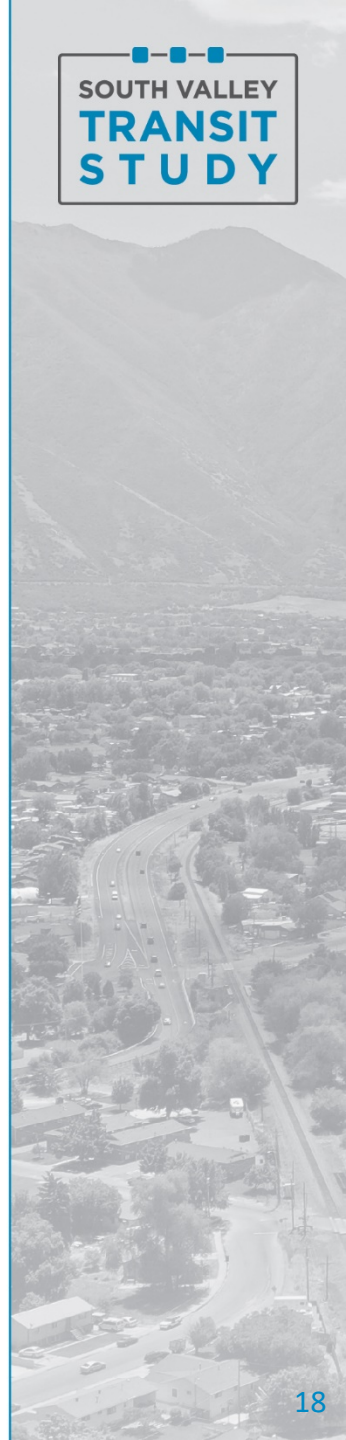
- Transit speed
- Transit reliability
- Transit connections
- Ridership potential
- Transportation impacts
- Community computability
- Economic development potential
- Cost
- Constructability considerations
- Operational considerations
- Environmental considerations

Initial evaluation:

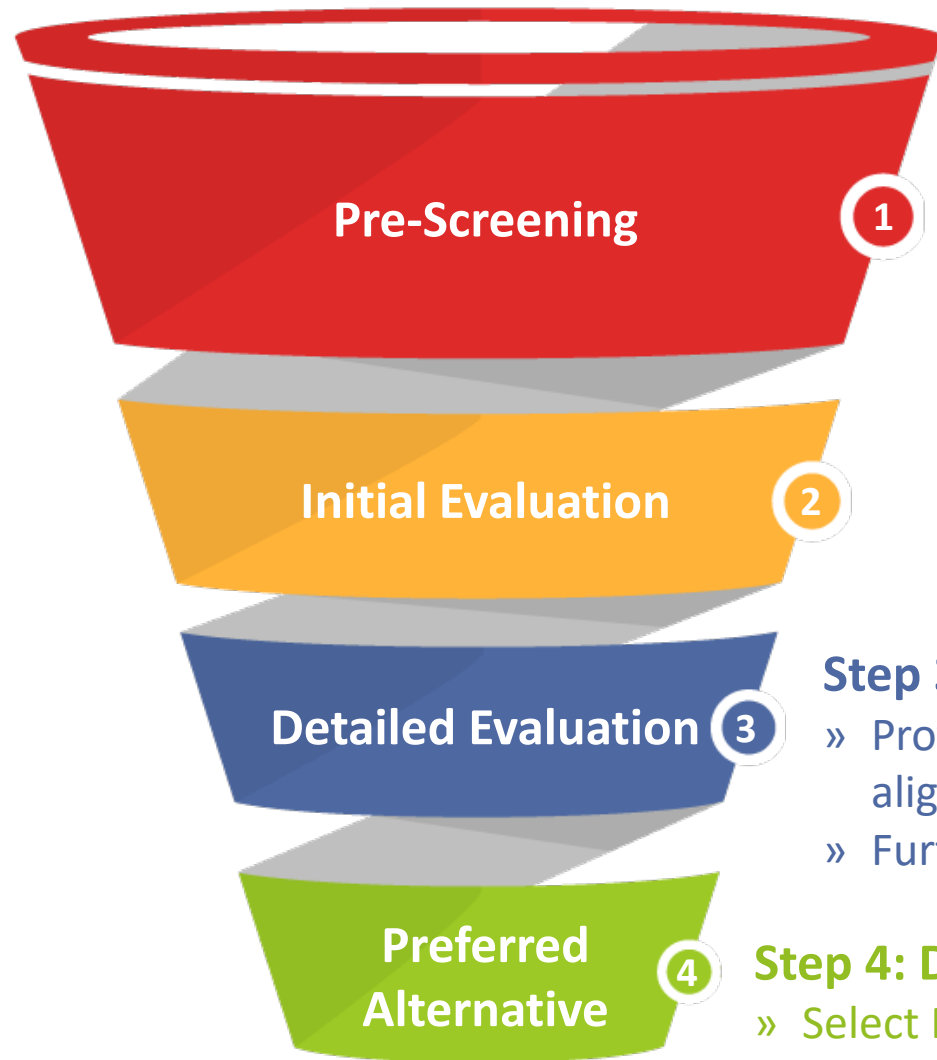
- ❖ Planning level analysis
- ❖ Minimal engineering

Initial evaluation criteria are:

- ❖ High-level
- ❖ Largely qualitative
- ❖ Help illustrate key differences



Alternatives Evaluation Roadmap – Future Steps



Step 3: Evaluate alternatives in more detail

- » Provide greater definition (identify service assumptions, stations, alignment details)
- » Further narrowing of alternatives

Step 4: Develop Implementation Plan

- » Select Preferred Alternative
- » Consider potential phasing options

