



# WIRELESS CHARGING

EMERGING BUSINESS MODELS

AN OEM'S PERSPECTIVE





# CURRENT STATE OF PLAY

- The technology works and is ready for prime time
- Systems are improving rapidly
  - Moving from 50 kW to 250 kW systems
  - On site componentry being reduced
- Pricing has come down significantly in last 12 months
  - Competition is good!
  - Reduced costs of power electronics, improved manufacturing ability, and volume should drive costs down further
- 2016 may be the turning point in transit industry – 5 major projects in the works
- Installation costs remain biggest X factor



# VENDORS - WAVE

## OEM Integrations



- Charging Capability – 50 kW in Commercial Deployment; 250 kW system in development
  - Single pad design for higher power
- Only vendor with system currently operating in transit service
- Installed projects with University of Utah, MST, AVTA & McAllen Transit
- LBT & CCCTA installations planned for 2016

## Transit Customers





# VENDORS - MOMENTUM DYNAMICS



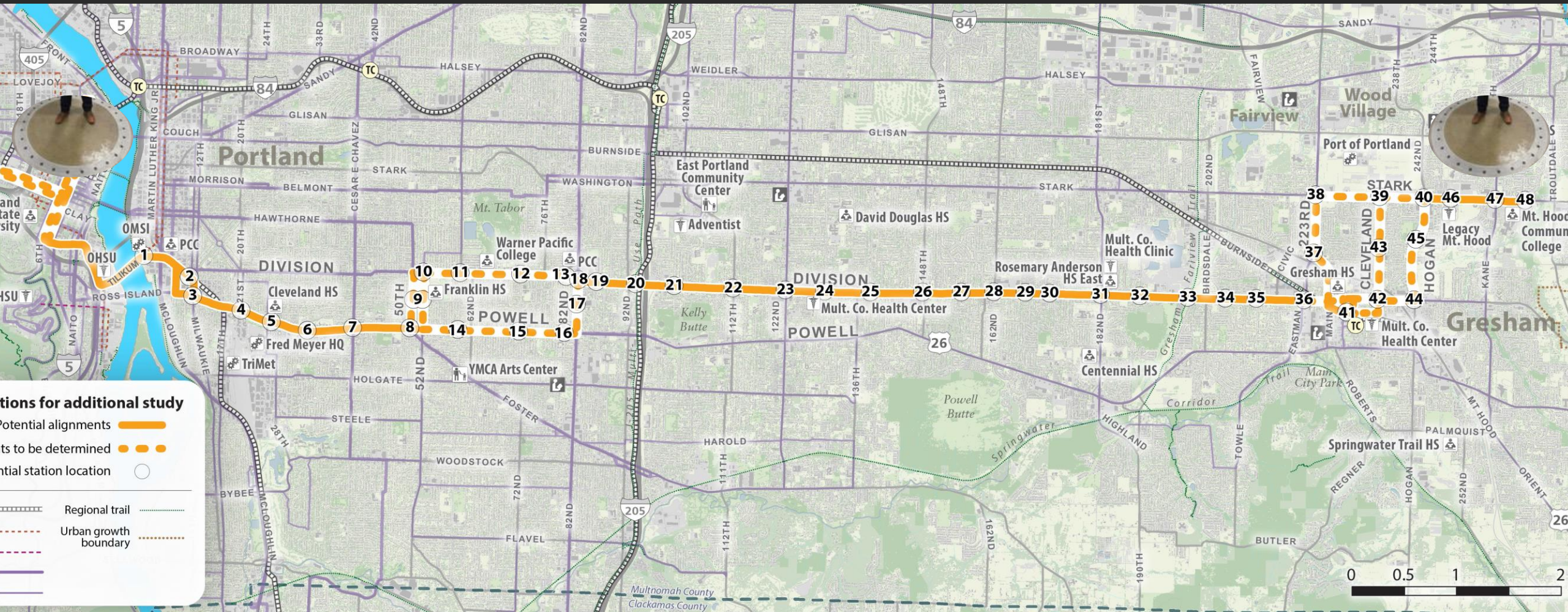
- Charging Capability – 50 kW in Commercial Deployment; 200 kW system deploying in 2017
- Modular approach to going up in power by combining 50 kW pads
- Offers lifetime extended warranty and support contract.
- First transit projects in 2017 with BYD for Howard County, MD and Link Transit.





# CURRENT CONSIDERATIONS

## Single Route / Demo Project Electrification





# MOVING FORWARD

## TRIMET



[trimet.org](http://trimet.org)



**Bus Service**

- 4 Frequent Service

Clackamas-Boring