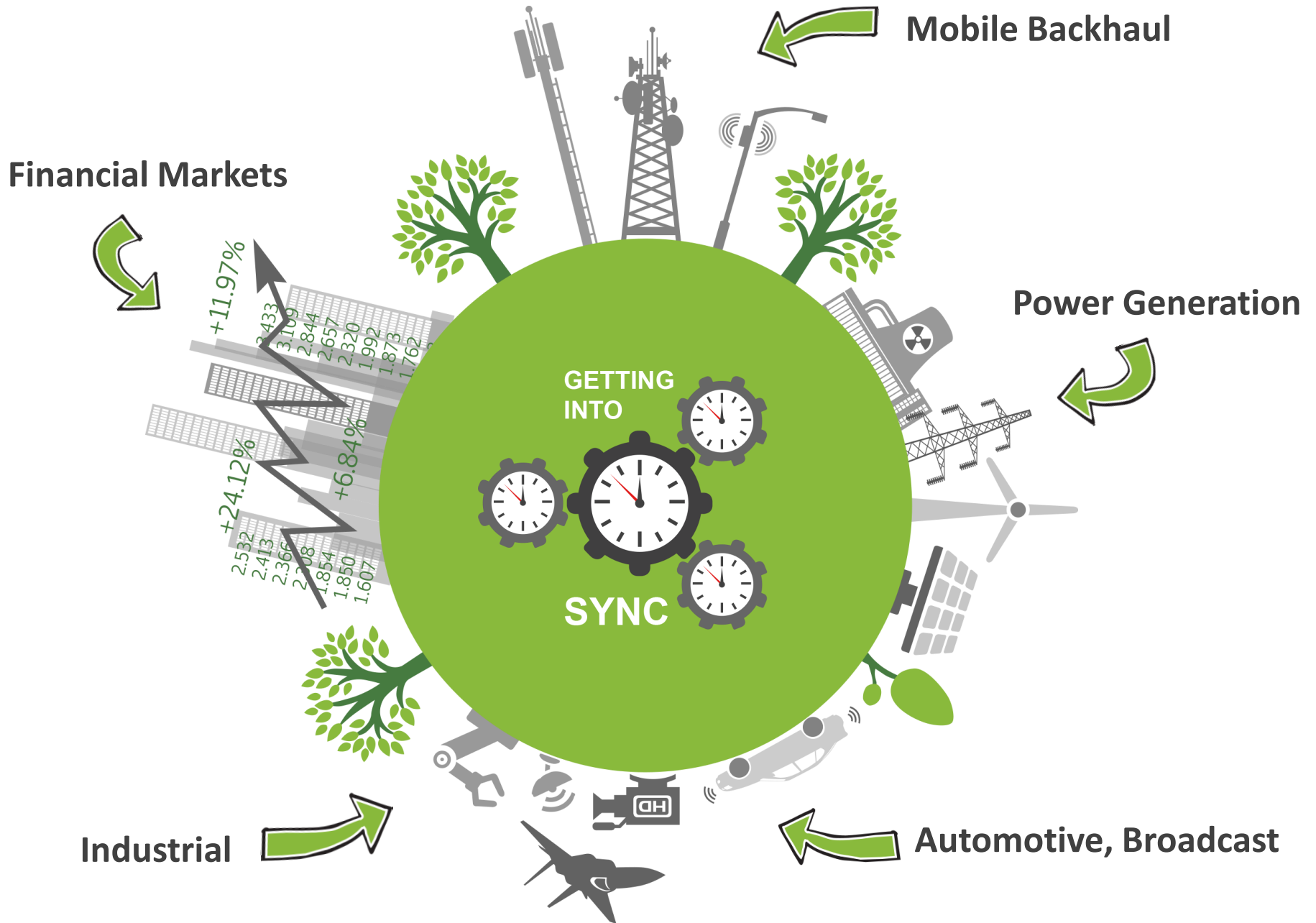


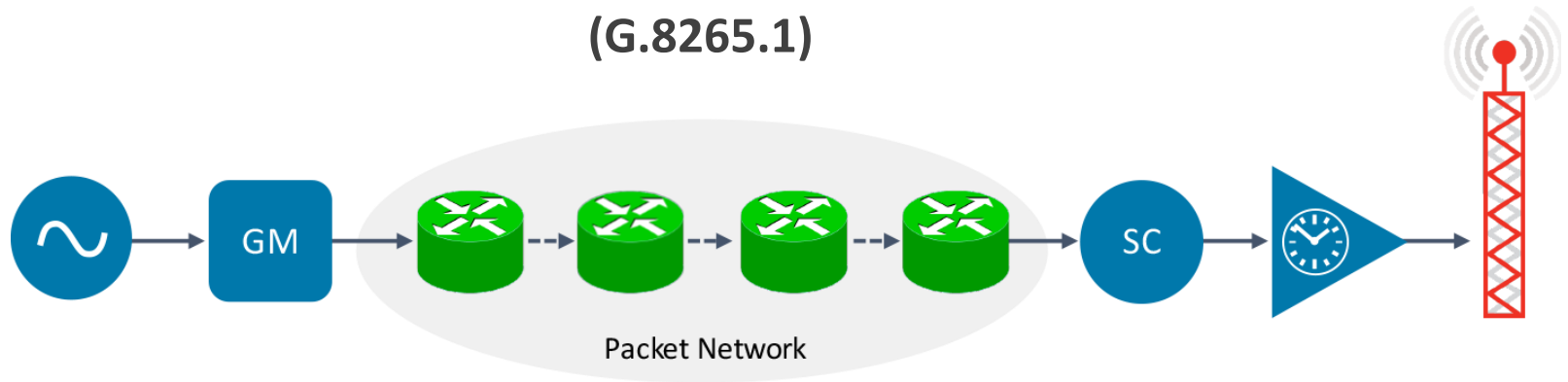
GETTING
INTO



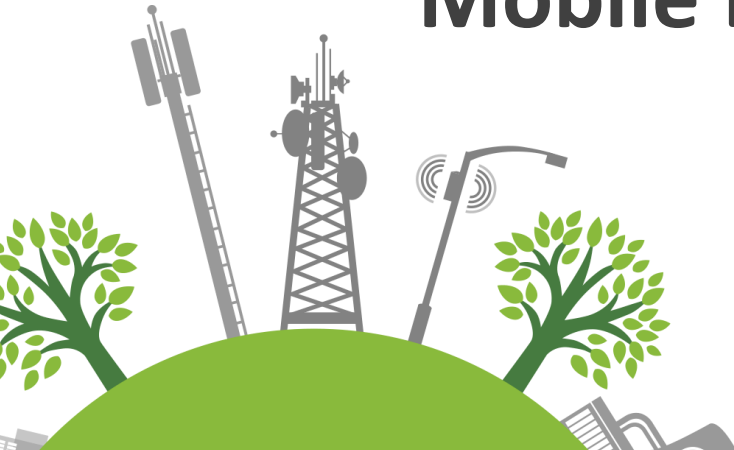
SYNC



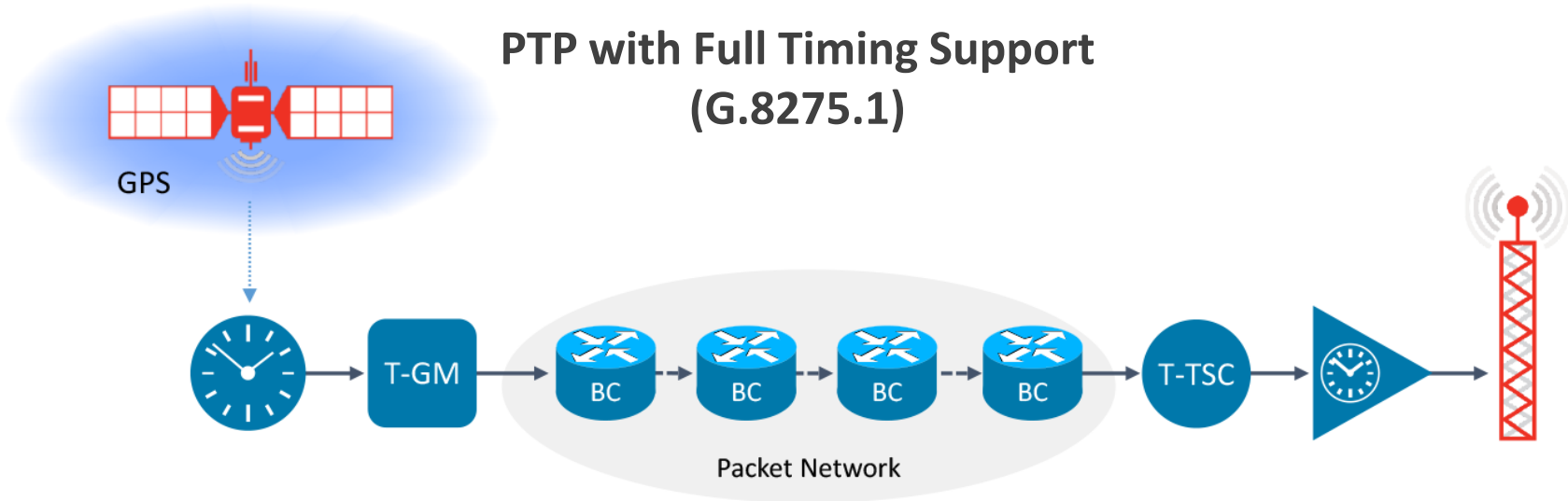
PTP with No Timing Support (G.8265.1)



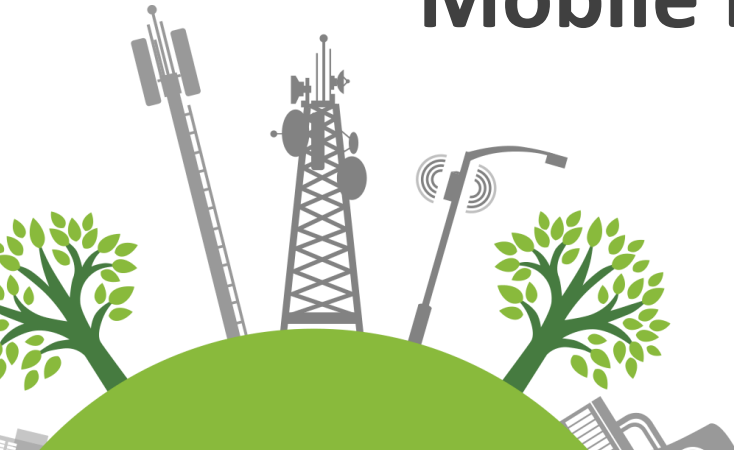
Mobile Backhaul



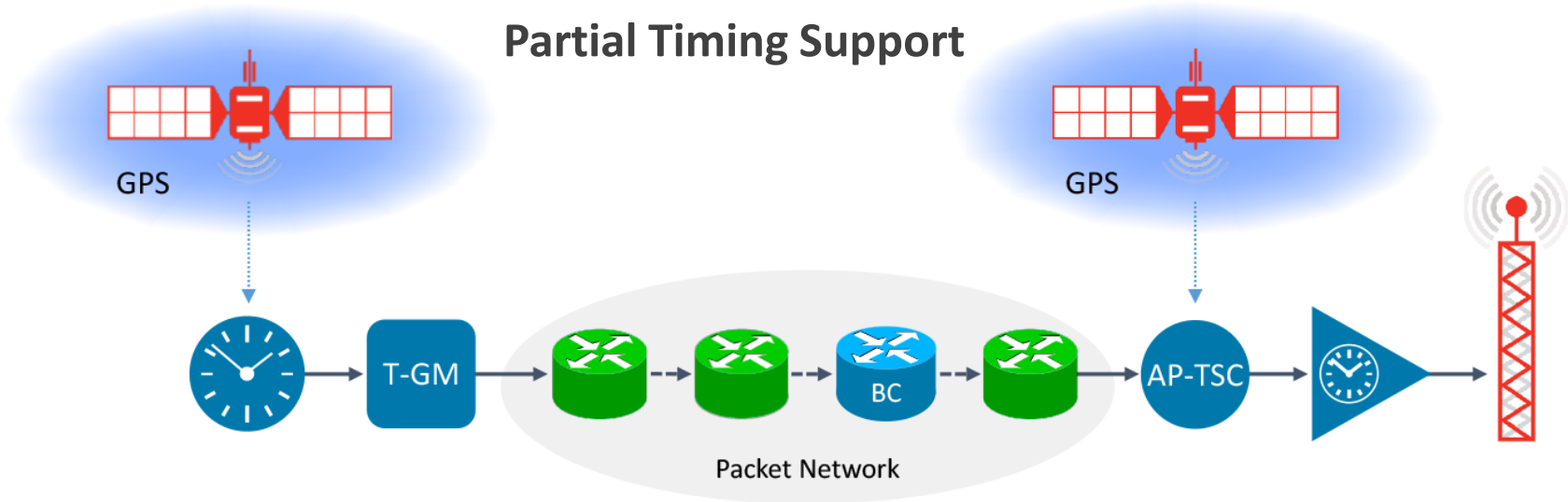
PTP with Full Timing Support (G.8275.1)



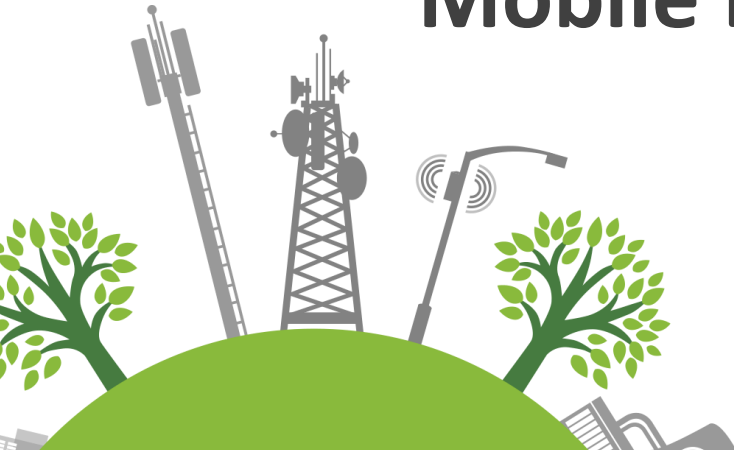
Mobile Backhaul



PTP with Assisted Partial Timing Support



Mobile Backhaul



IEEE 1588 states in clause 19.3.1.1:

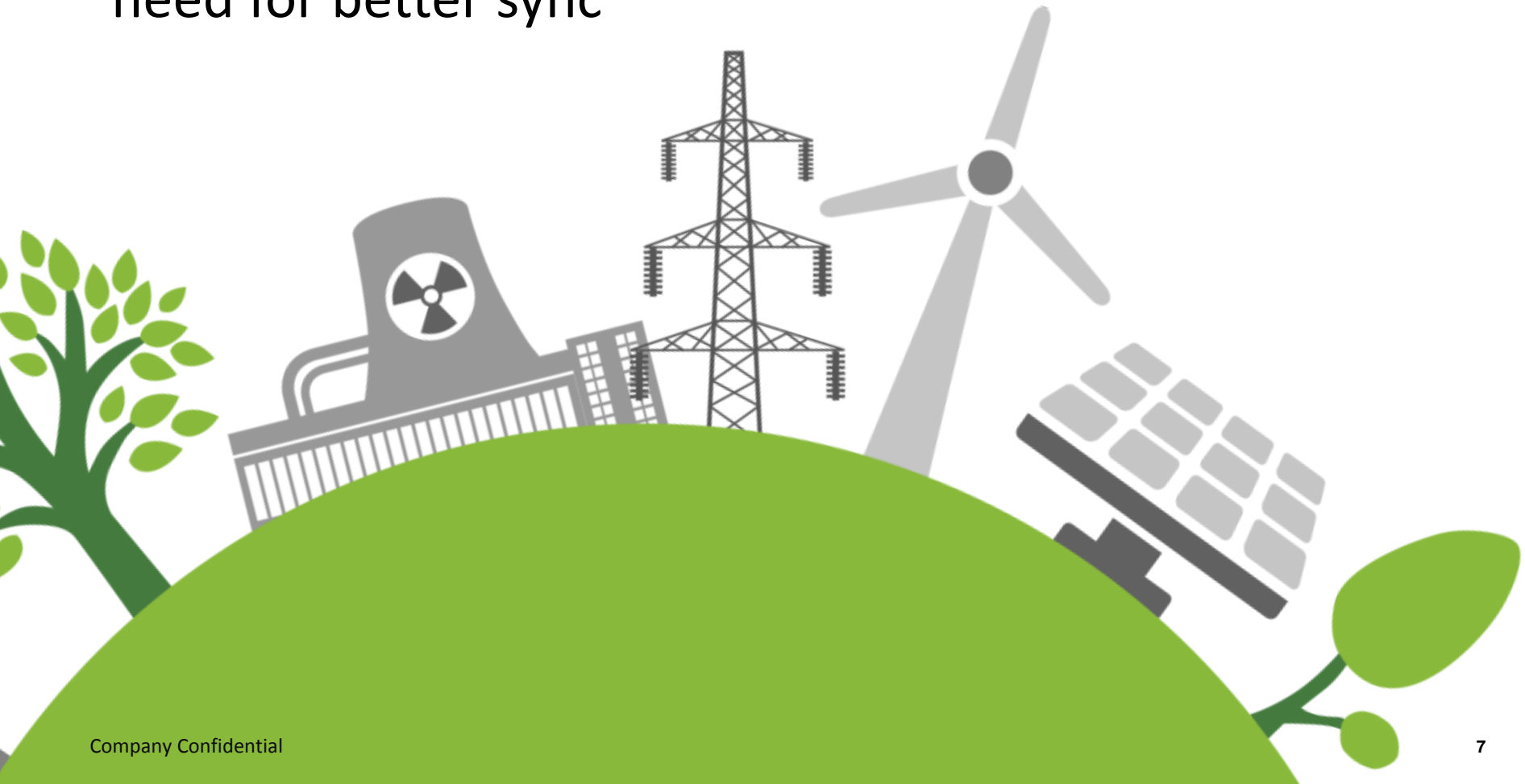
"The purpose of a PTP profile is to allow organizations to specify specific selections of attribute values and optional features of PTP that, when using the same transport protocol, inter-work and achieve a performance that meets the requirements of a particular application."

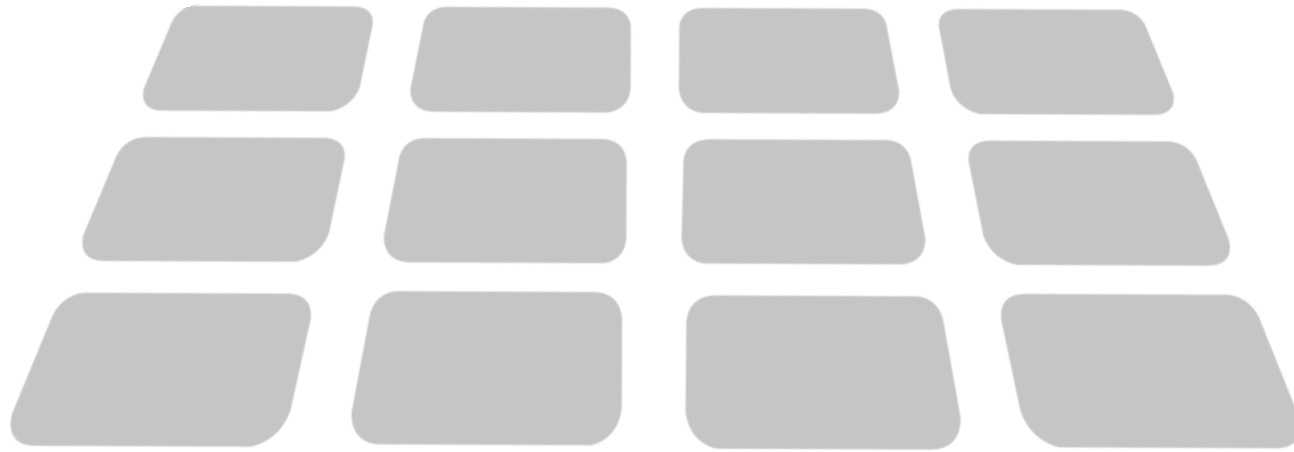
allow

n using
work
sheets

New Power Generation: the SMARTGRID

Greater complexity and diversity drives the need for better sync



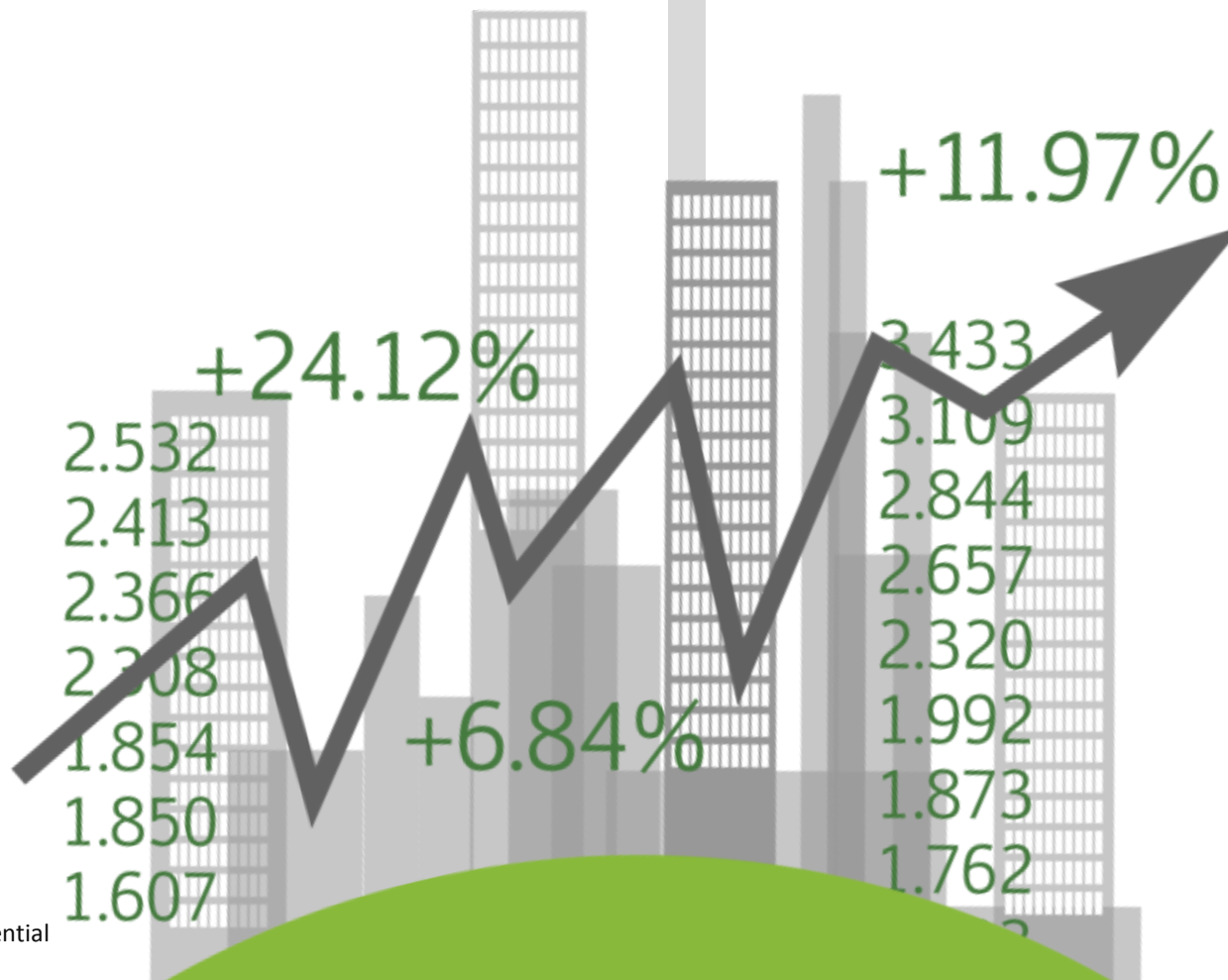


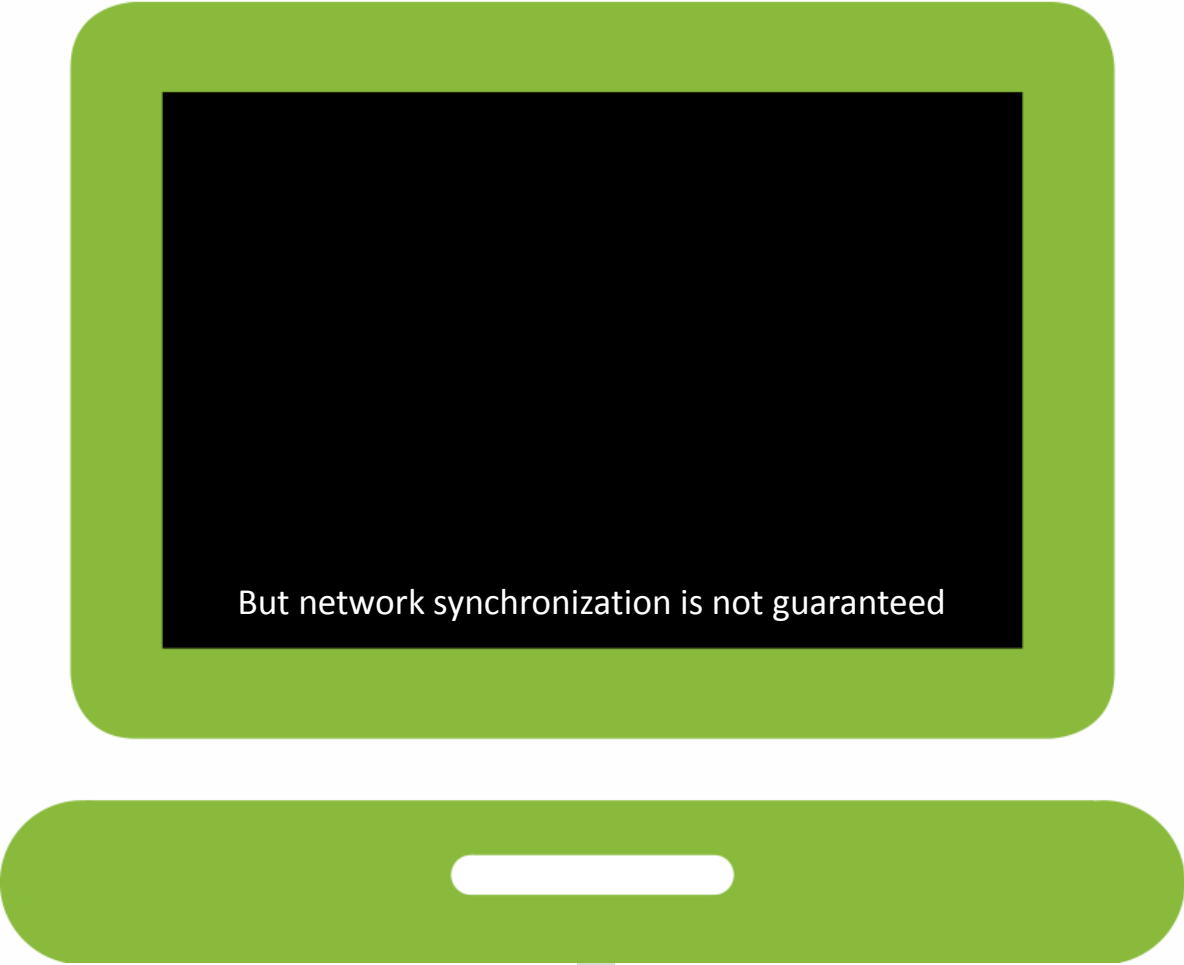
PTP = greater efficiencies + greater diversity

Power Profile IEEE C37.238-2011 currently being aligned with new IEEE 1588

Financial Markets

High-Frequency Trading requires
accurate timestamping of trades





But network synchronization is not guaranteed

**Sync is provided
primarily by GPS,
but . . .**

Coverage and signal loss
is a significant and
expensive issue



Weak security - a US\$20
device can jam GPS
signals

The alternative? Timing via 1588 PTP

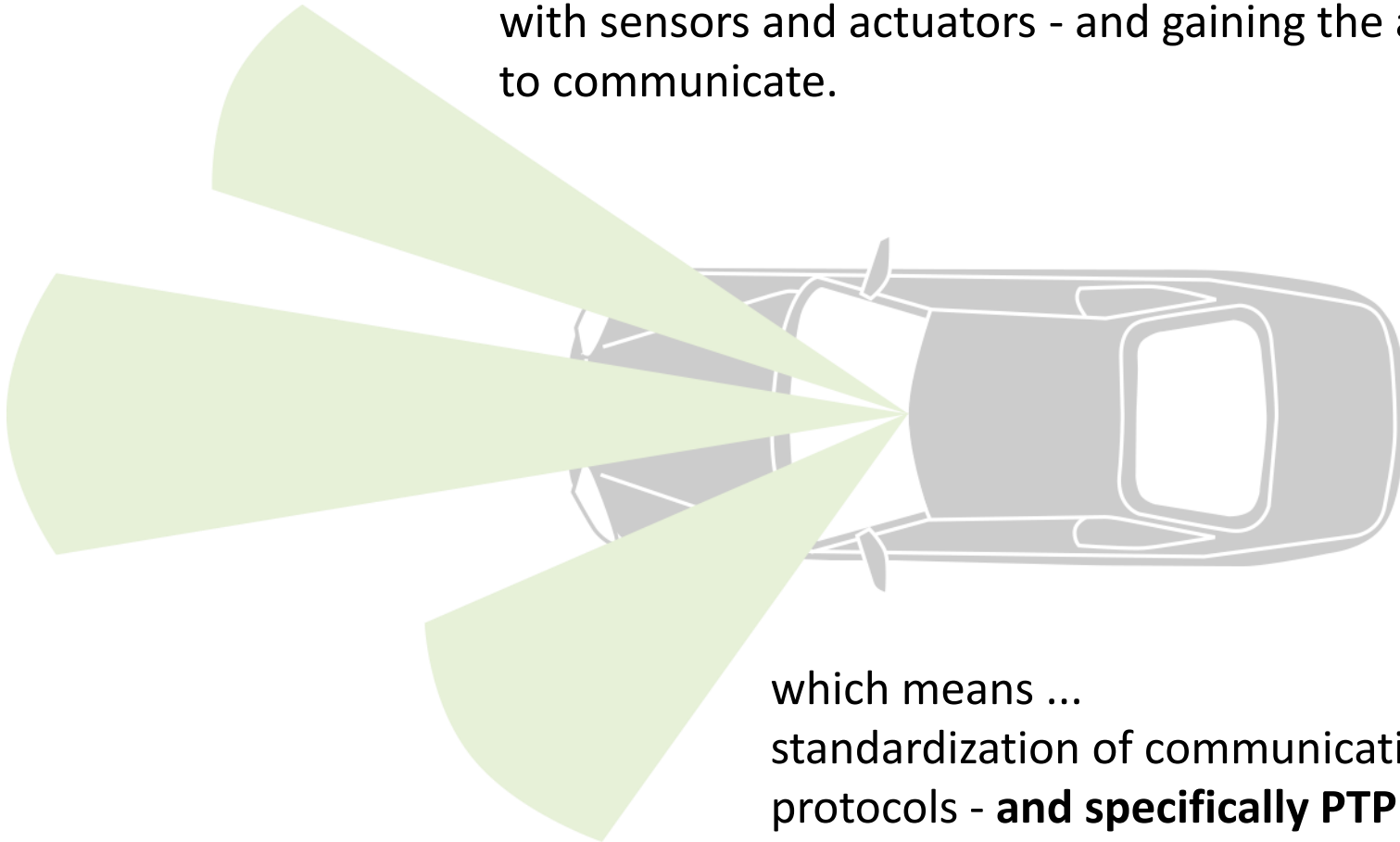
IETF: Draft Enterprise Profile for PTP
(latest version -05, Feb 2015)

Industrial Internet

Time Sensitive Networking

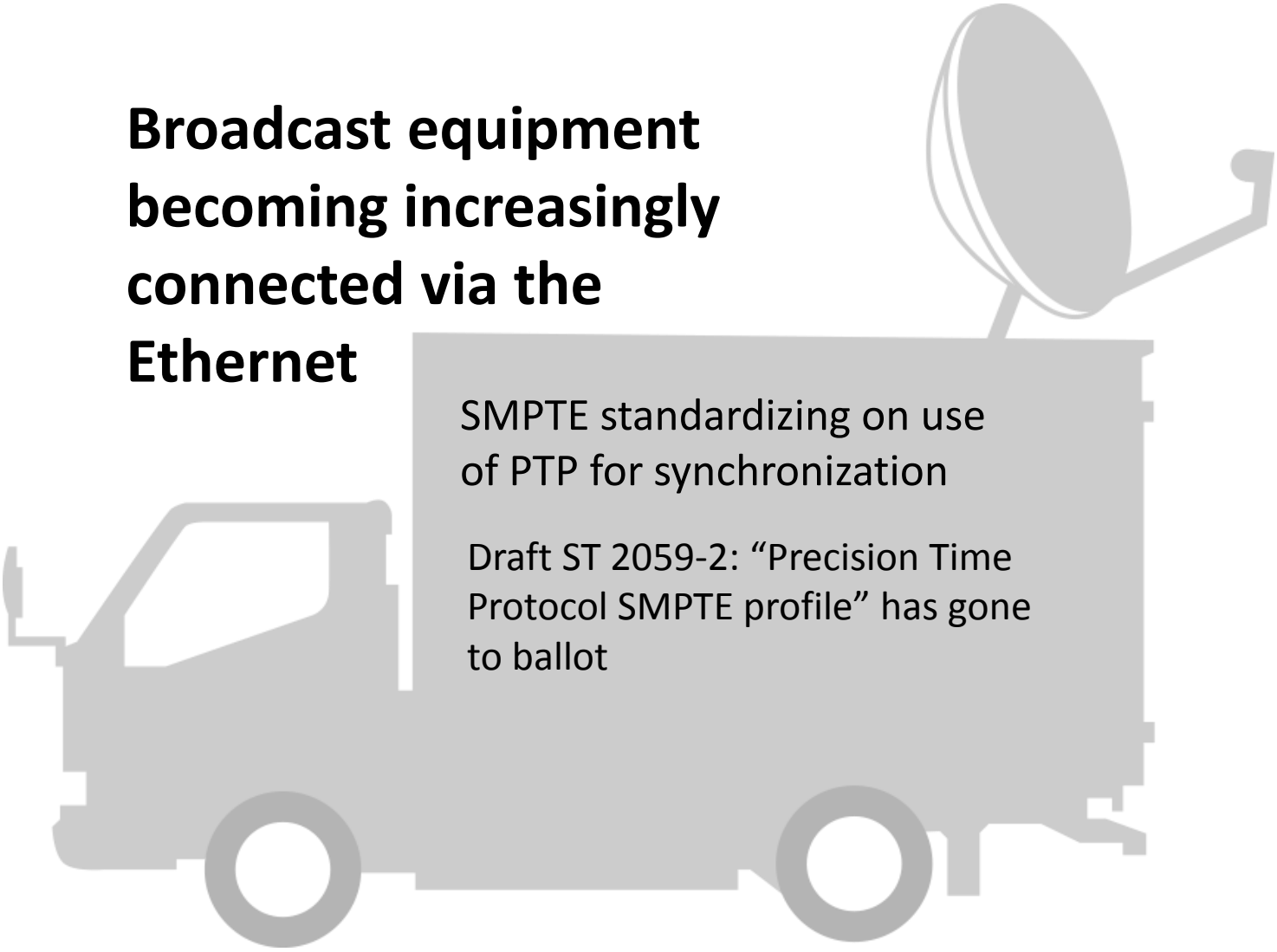


More and more objects are becoming embedded with sensors and actuators - and gaining the ability to communicate.



which means ...
standardization of communications
protocols - **and specifically PTP profiles** -
will be required

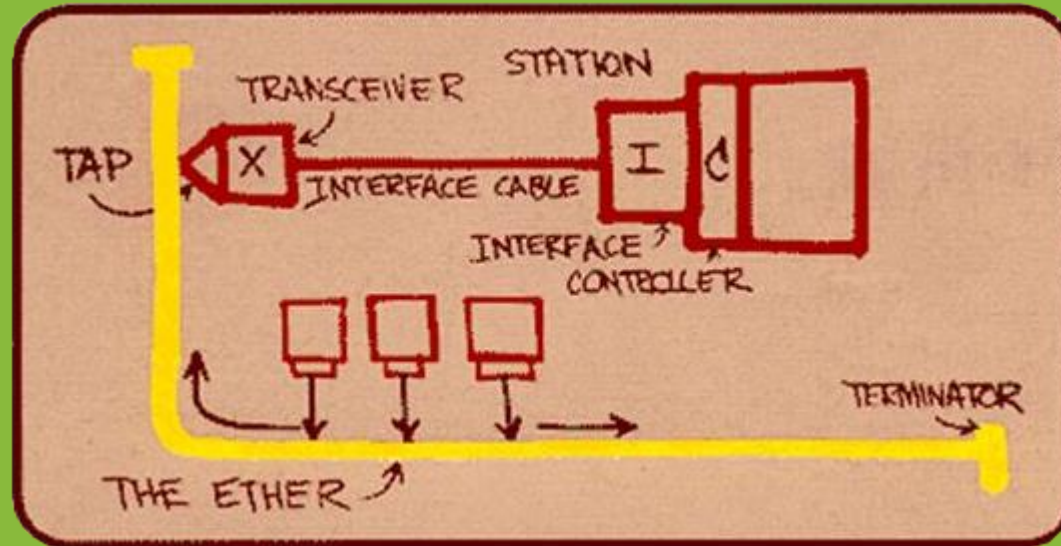
Broadcast equipment becoming increasingly connected via the Ethernet



SMPTE standardizing on use
of PTP for synchronization

Draft ST 2059-2: “Precision Time
Protocol SMPTE profile” has gone
to ballot

From modest aspirations ...



Now, Ethernet is keeping the world in sync.