



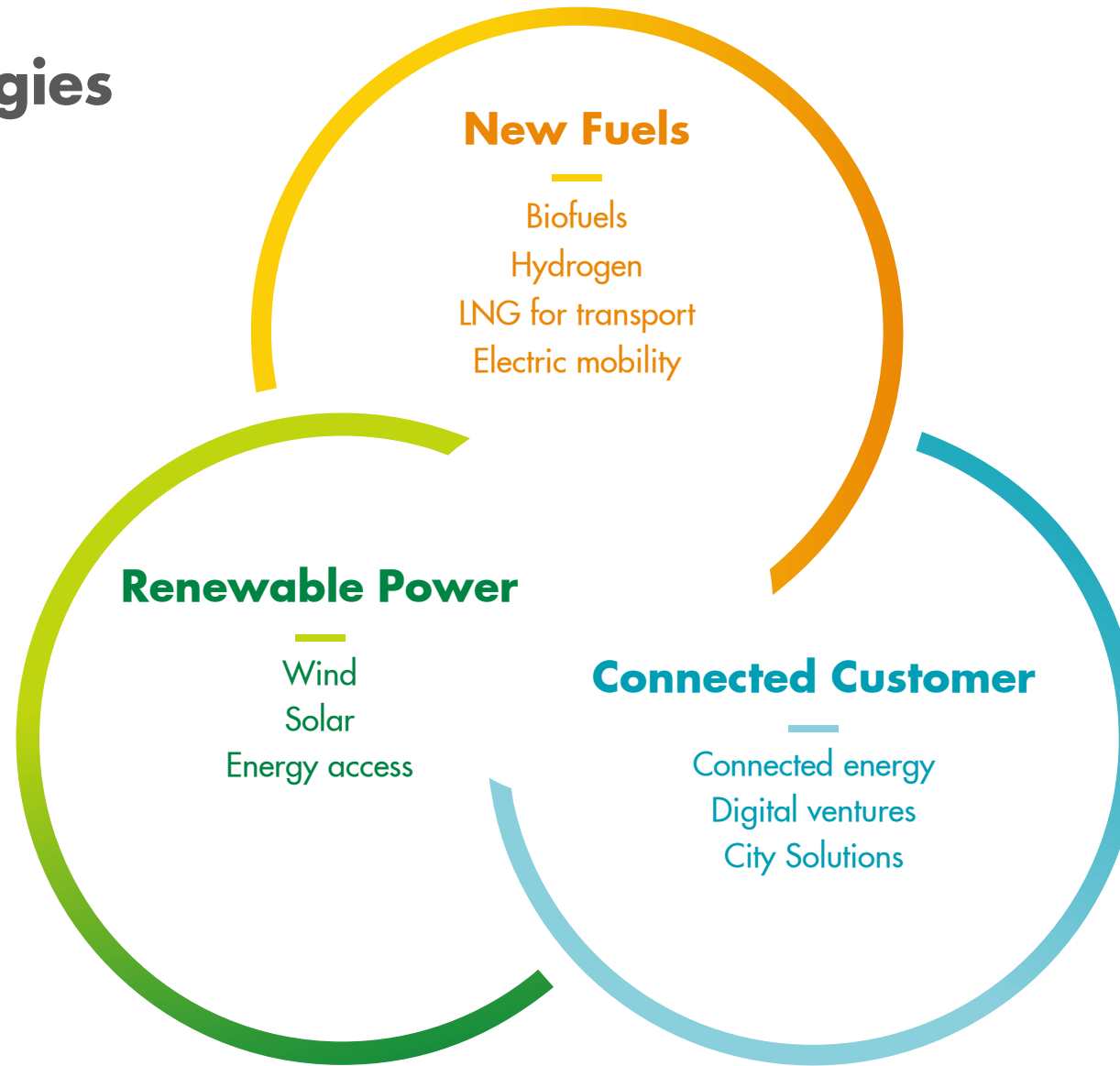
Shell Connected Energy

BIS Kickoff 2018

BIS Project: Icebreaker and your objectives

- Q 1: Why BIS? Why Shell Connected Energy?
- Q 2: What do you hope to gain from this experience?

Shell New Energies



Shell Connected Energy

Connected Energy, a division of Shell New Energies, deploys, aggregates, and monetizes distributed energy resources (DERs). Our fully wrapped DER solutions enable **load flexibility, lower energy costs, resilient power, and sustainable electricity supply.**



Solar & storage



Standalone
storage



Demand
response



Load
management



Energy
efficiency






Insight & analytics into site energy usage & technology performance

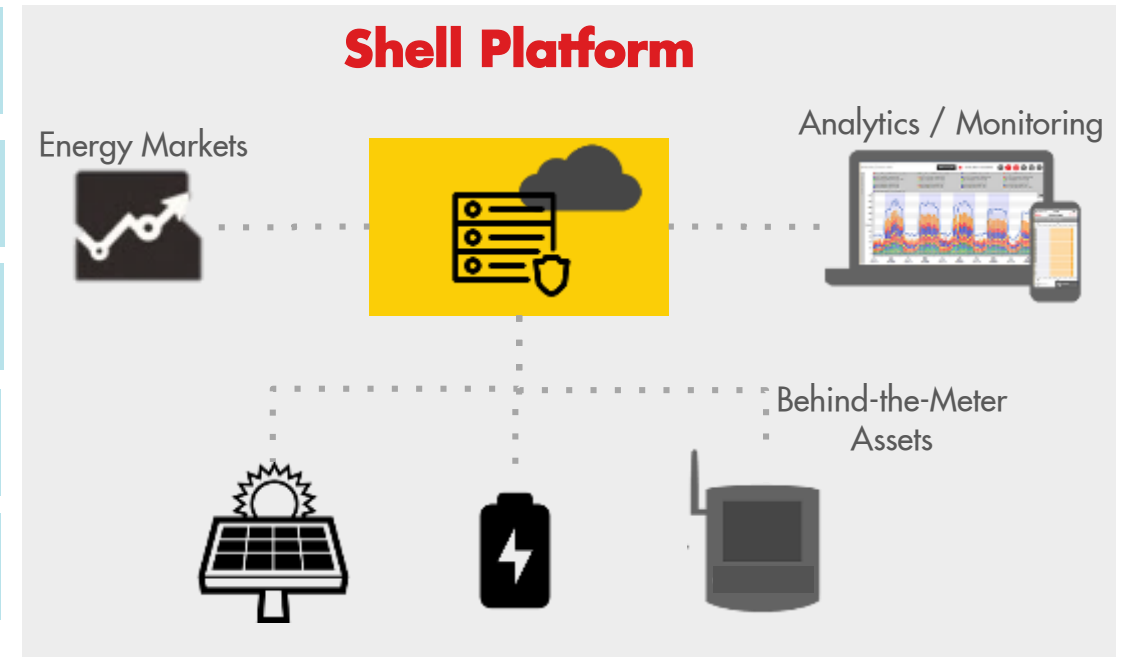
Our offering



- Upfront financing of DER assets
 - “No money down” contracts for customers
- Competitive vendor selection and contracting
 - Renewable energy project development
 - Sub-metering and controls equipment
- IT platform for local DER participation
 - Management of DER assets
 - Optimization of assets between wholesale & retail markets

Case Study I UK

-  Deployment of HVAC Optimization to **536** Retail Stations
-  Deployment of **6.6 MWh** Battery Storage to **536** Retail Stations
-  Deployment of HVAC Optimization to **4** Office Buildings
-  Deployment of **3.2 MW** Demand Side Response to **4** Sites
-  Deployment of **25 MW** Onsite Gas Generation to **2** Sites





Shell E Mobility activities

The electric vehicle charging evolution

1

Initial deployments offered free and open access to charging infrastructure

2

Site hosts identified need for access control

3

Site hosts realized need to establish equitable access to infrastructure

4

Industry Participants requested vendors to provide billing and reporting support functions

5

Stakeholders seek to utilize infrastructure to achieve overall energy cost avoidance and participate in utility demand response opportunities



Experience & expertise:

Shell has run managed charging trials in 3 markets for 2 years

1 CVP:

- Managed charging of commercial fleet EVs to reduce the cost of charging
- Shell aggregates power demand across fleets & trades them in power markets to take advantage of lower costs & income opportunities from the need to always ensure the grid is balanced.
- Customer hands over control of EV charging to Shell

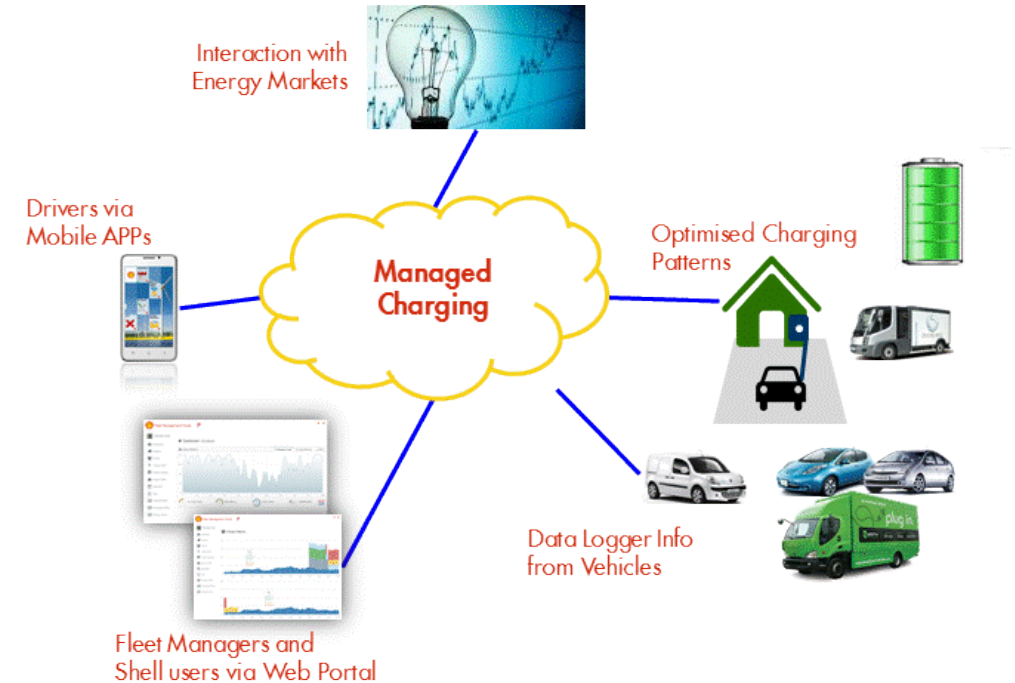
8 commercial fleet customers

Mix of partners:

- Demand response/Virtual power plant operator
- Regulated utility
- Local grid operator





3 locations: San Diego; London; Hamburg

Different market types e.g. High renewables penetration; different power trading market characteristics; constrained local grids

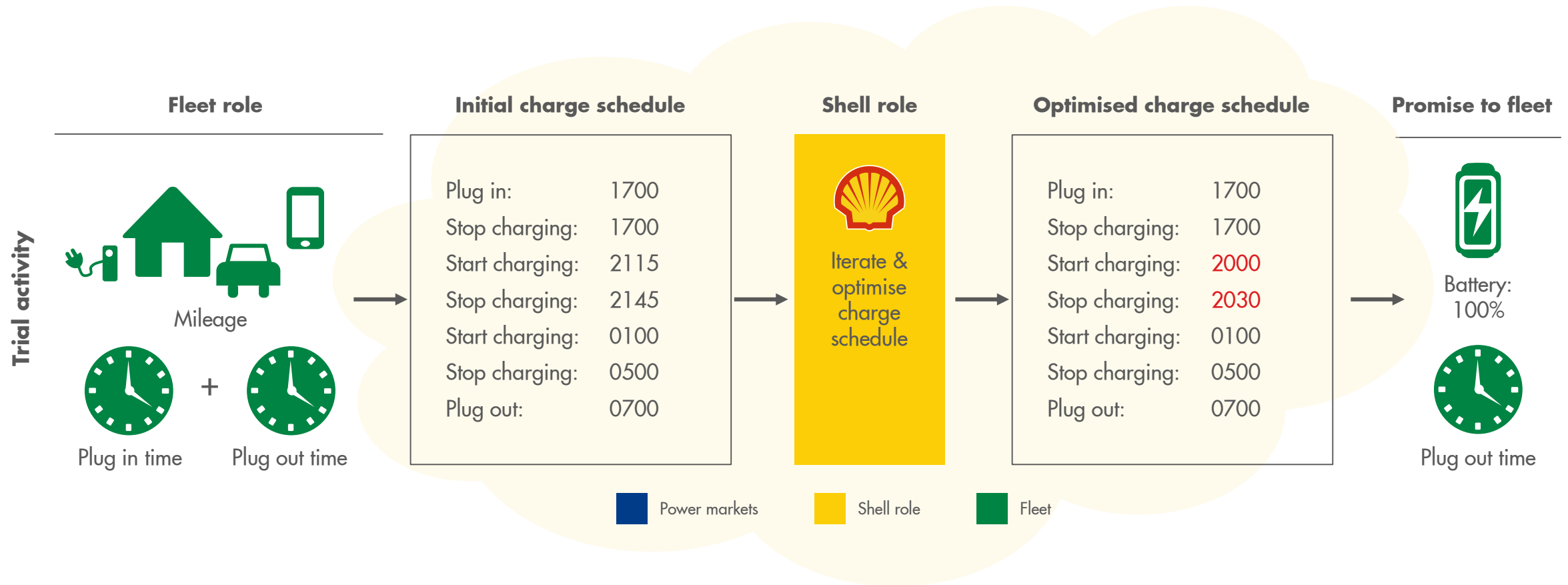


Scale & scope:

Shell the first player to prove concept in reality and globally

			Fleet types				
Characterisation	# fleets	# EV	Delivery	Service	Workplace	Pool	Partners
 California <ul style="list-style-type: none">■ National peak demand challenge■ Local grid constraints■ (Peak demand tariff structure)	3	26	✓		✓	✓	  

Shell has developed its own managed charging system





Managed solutions for various market segments

1

Fleet Automobiles
and Medium Duty
Vehicles

4

Workplace
employee and
visitor charging

2

Urban Multi-unit
dwelling residents

5

State and federal
government
locations

3

Commercial
customer and
Public charging

6

Non-Automobile
Fleet Utility
Vehicle Managed
Charging

BIS Project: How the West was won

- This project will focus on a market analysis and go-to-market plan
- For these products:
 - Solar + Energy Storage
 - Energy Storage
 - EV Charging + Energy Storage
 - Load Controls and Demand Response
- In the Western US
 - CA
 - AZ, HI
 - CO, OR, WA, ?
- For Commercial and Industrial Customers

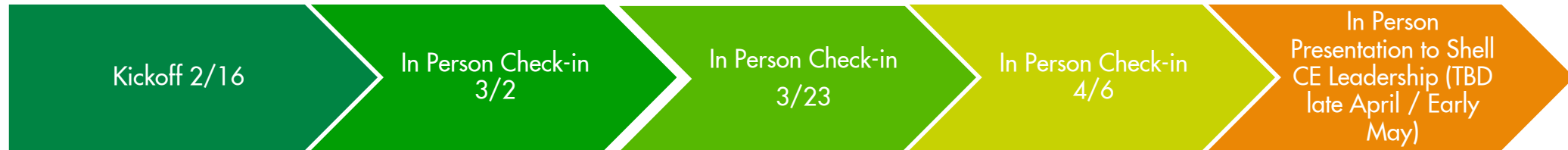
BIS Project: What are we looking for

- Strong focus on voice of the customer and CVPs:
 - Interviews / Surveys
 - What are the customer problems to be solved?
 - What are customer unmet needs?
 - What drives purchasing decisions?
- External perspectives
 - Our team has already done a GTM for CA, we want to hear from you!
- What makes Shell different
 - How are we/should we be unique from other DER developers (Tesla, Stem, AMS, etc.)

BIS Project: Deliverables (in order of priority)

- Customer interviews and surveys
- Market analysis for selected markets
 - Include CA, but focus primarily on other states
- Go-to-market plan
 - Include CA, but focus primarily on other states
- Others?

Timeline



- In addition to (weekly?) Skype check ins, 3 in person sessions to track progress
- Completed slides and associated materials turned in by end of April
- Presentation to CE Leadership late April / early May
- Thoughts?

Thank you!



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