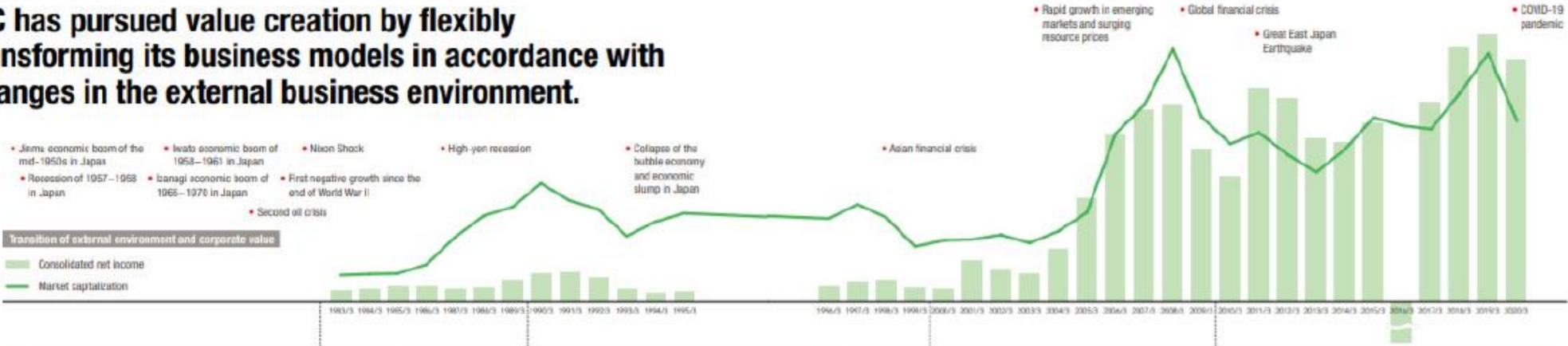


Mitsubishi Corporation CCU / Carbon Removal Activities



Mitsubishi History

MC has pursued value creation by flexibly transforming its business models in accordance with changes in the external business environment.



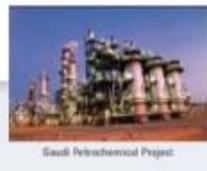
Trading Phase
 From its founding until the 1980s, MC was primarily involved in the trading and distribution business. The Company supported a wide range of industries by serving as an intermediary, connecting suppliers and buyers across international borders in order to respond to market changes and customer needs. Given the underlying expansion of trading volumes for numerous industries throughout Japan's period of rapid economic growth up to the 1980s, MC, with trading commissions as its primary revenue source, saw its financial performance steadily improve.

Trading Evolution Phase
 In the mid-1980s, a strong yen pushed Japan into a recession, which was followed by the economic bubble and its subsequent collapse. During this period, the business environment surrounding *sogo shisha* became increasingly severe, as the notion was that such intermediaries were unnecessary. Under these circumstances, MC decided to step out from its role as an intermediary by striving to maintain and, where possible, expand its trading volumes by executing minority investments in upstream and downstream fields as well as by enhancing its existing functions in order to provide added value as a trader and distributor.

Business Model Transformation Phase (Acceleration of Business Investment)
 Entering into the new millennium, value chain dynamics for industry as a whole began to change, and it became necessary to transform the trading business model completely. MC sought a new way forward by pursuing business models that transcended the bounds of the traditional trading business. By accelerating business investments, MC embarked upon a new course of more proactively managing businesses.

Business Management Phase
 Due to a shift in the market environment for natural resources, MC recorded its first ever net loss for the fiscal year ended March 3 2016. Since then, MC has worked to rebalance its resources and non-resources businesses and has emphasized cash flow in management. Under Midterm Corporate Strategy 2021, MC is currently endeavoring to shift its business model from one that looks to investment as a source of growth to a model of "managing" businesses by becoming more deeply involved in operations and leveraging MC's unique management capabilities to actively generate value and drive growth.

Major Events



CCU activities

- Investment
- Business Development



Natural Gas Group



Industrial Materials Group



Petroleum & Chemicals Solution Group



Mineral Resources Group



Industrial Infrastructure Group



Automotive & Mobility Group



Food Industry Group



Consumer Industry Group



Power Solution Group



Urban Development Group

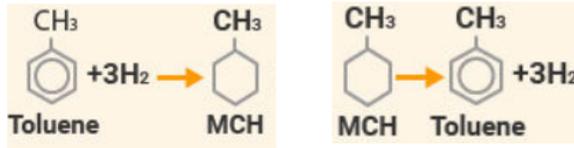
EX : Energy Transformation

Renewable Energy



H2/Ammonia

• SPERA Hydrogen (MCH)



• Ammonia Fuel

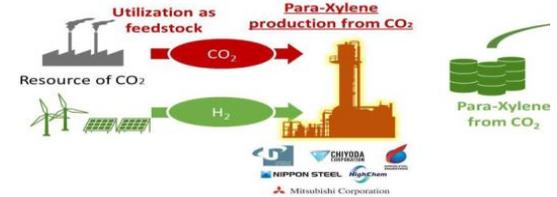


CCUS

• CCU Mineralization

	① Cement replacement/CO2 mineralization to concrete	② CO2 mineralization to aggregate
Ready Mix 21bil t (70%)	<ul style="list-style-type: none"> CCU Ready Mix CARBON CURE Investment Business development 	<ul style="list-style-type: none"> CCU Aggregate Blue Planet Investment Business development
Precast 9bil t (30%)	<ul style="list-style-type: none"> CCU Precast CO2-SUICOM Exclusive license New technology development 	<ul style="list-style-type: none"> O.C.O TECHNOLOGY New technology development Carbon credit development

• CCU Paraxylene



Battery



EV



Others (logistics, smart city)



Mitsubishi CCU business

Emitter

Point Source

- Oil&Gas Upstream
- Oil&Gas Refining
- Thermal Power
- Steel Mill
- Cement
- Chemical
- Biogas



Distributed Source

- Transportation
- Agriculture
- Boilers



Atmospheric

- Air



Capturing & Separation

- Chemical Absorption
- Physical Adsorption
- Membrane Separation

Pre-Combustion



Post-Combustion



Oxy-Combustion



Direct Air Capture



Biological

- Vegetation



Storage & Utilization

Geological Storage

- CCS
- CO2-EOR



Direct Use

- Beverage
- Agricultural



Mineralization

- Synthetic Limestone
- Cementing
- Aggregates



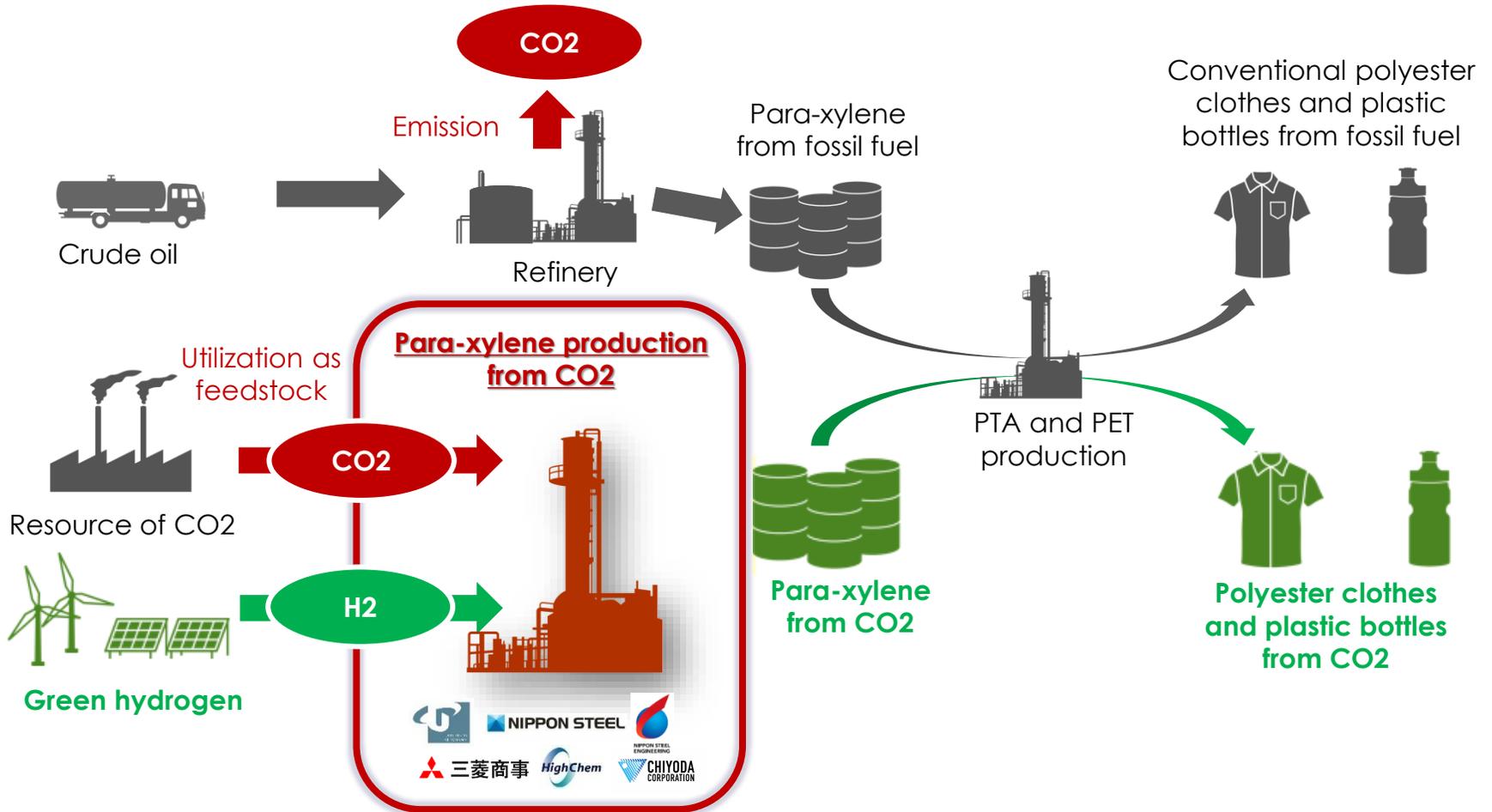
Reformation

- Carbon Monoxide
- C1/C2 Chemicals
- Fuel



CO2 to Clothing

- JP gov. grant for **Para-xylene production from CO2 R&D**

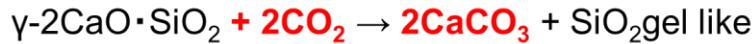


CO2 to Concrete

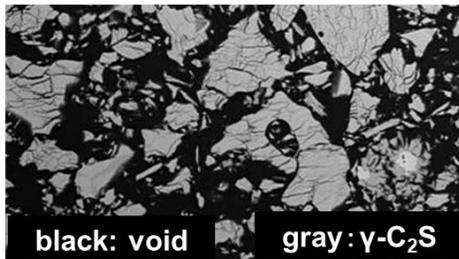
- **Green Concrete Consortium** a combination of CCU mineralization projects

	① Cement replacement/CO2 mineralization to concrete	② CO2 mineralization to aggregate
<p>Ready Mix</p> 	<ul style="list-style-type: none"> • CCU Ready Mix 	<ul style="list-style-type: none"> • CCU Aggregate 
<p>Precast</p> 	<ul style="list-style-type: none"> • CCU Precast 	

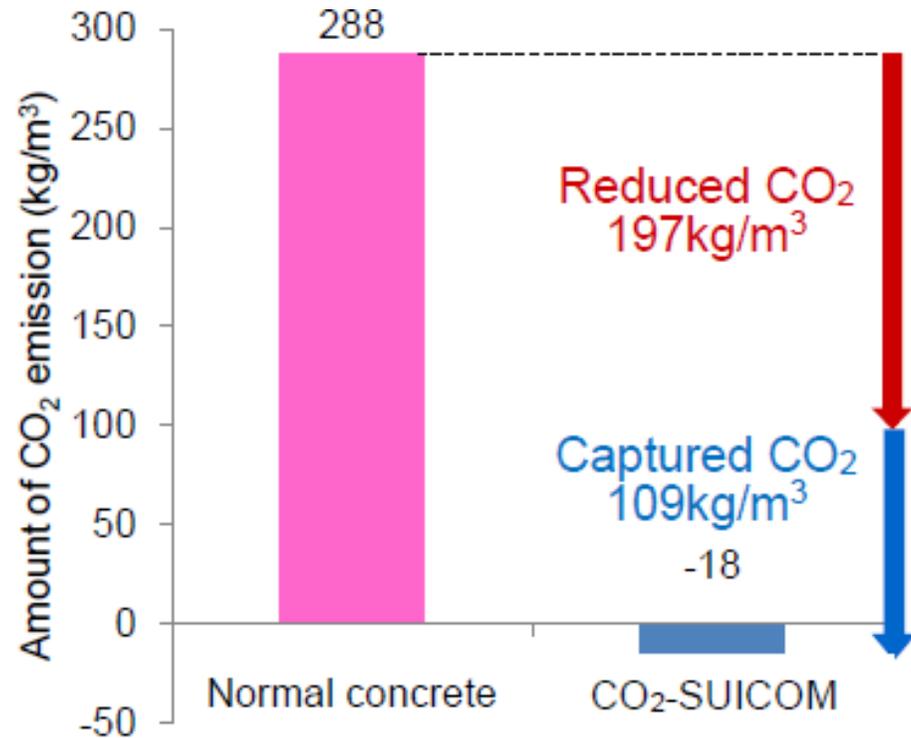
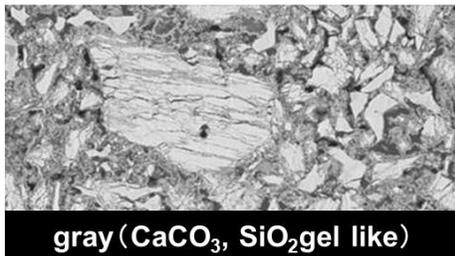
- World Only commercial ready **Carbon Negative Precast Concrete**
- Business development** and **R&D**



Photomicrograph of concrete interior



↓ React with CO_2



- Commercial ready technology with **Economic and Climate benefits for ready mix producers**
- **Share holder** and **Business development** in Asia



Building A Greener Future

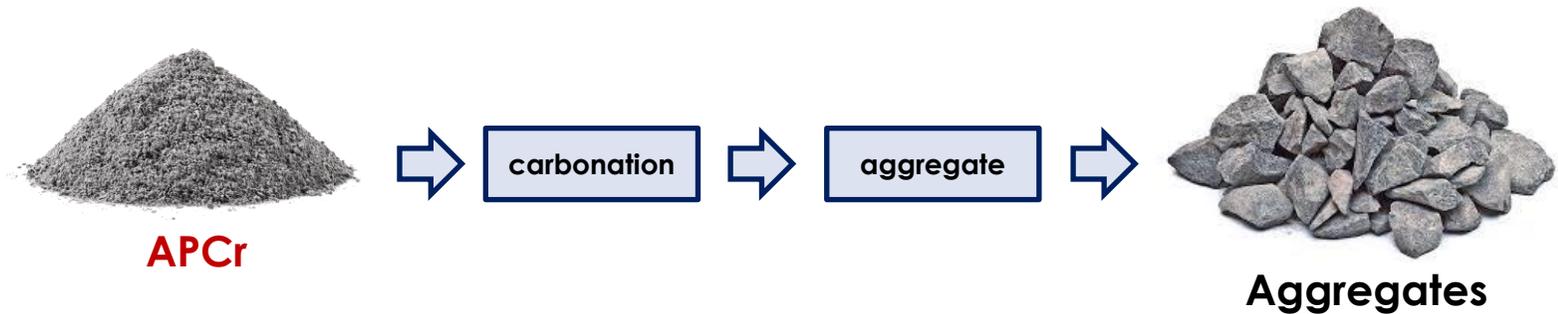
with  CARBONCURE.



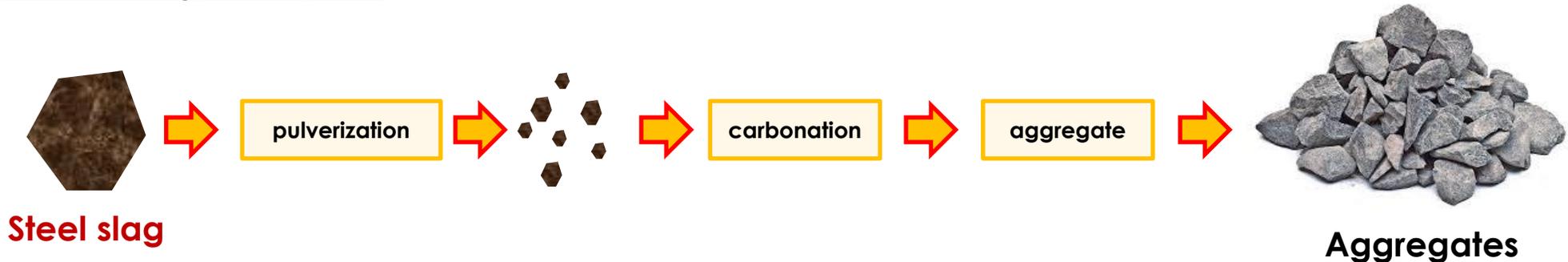
1. Waste CO₂ emissions are collected from local industrial emitters by gas companies and then purified.
2. The purified CO₂ is stored onsite at the concrete plant and connected to CarbonCure's technology.
3. CarbonCure's technology injects CO₂ into the fresh concrete to create high-performing, low-carbon concrete.
4. Private and public projects are built with CarbonCure concrete, reducing embodied carbon in new buildings.

- Commercial ready technology for **waste material carbonation**
- R&D to carbonate residual materials, such as **steel slags**.

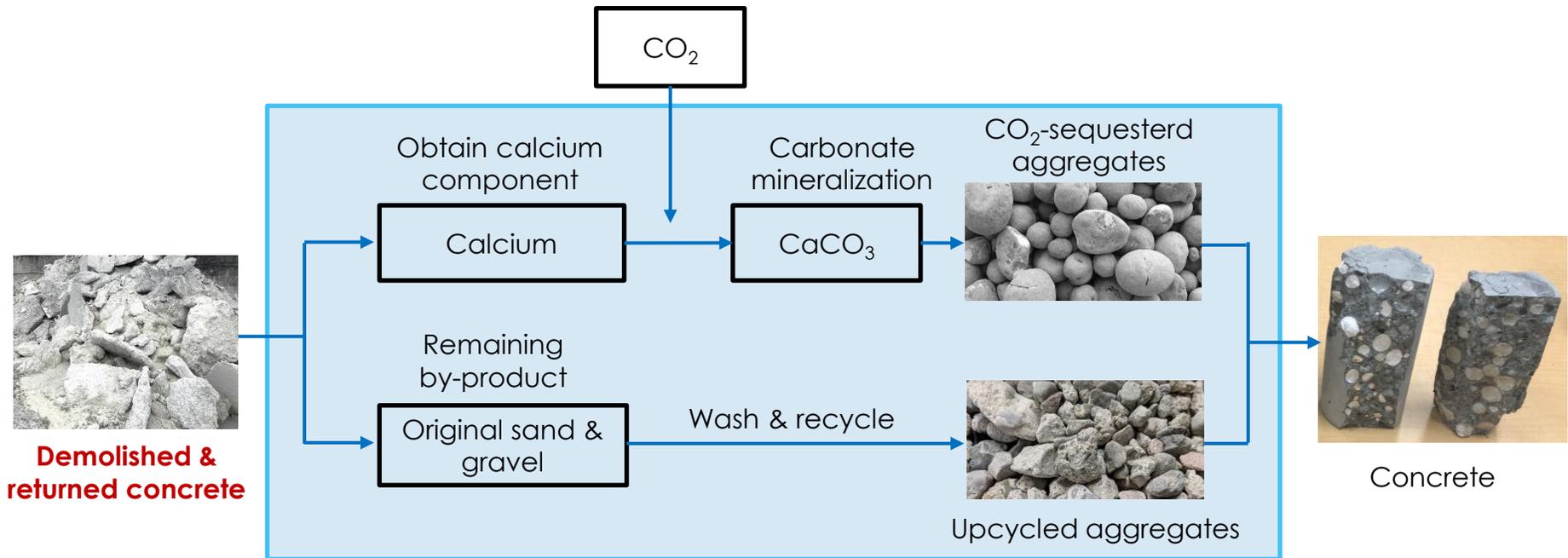
Current Technology



New Technology Development



- Aggregates from **demolished/returned concrete carbonation**
- **Financing** to support feasibility project in California.



- **Credit trading facility for Technical Carbon Removal** with South Pole
- Procure USD300mil certified technological carbon removal credits



Thank you feel free to contact



yusuke.tsuji@mitsubishicorp.com



Mitsubishi
Corporation