



Wheels for the World

Michigan's Automotive History

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Take it Forward.™



the
**Henry
Ford**

Outline

I. Origins

II. Why Detroit?

III. Key Founders and Figures

IV. Maturity

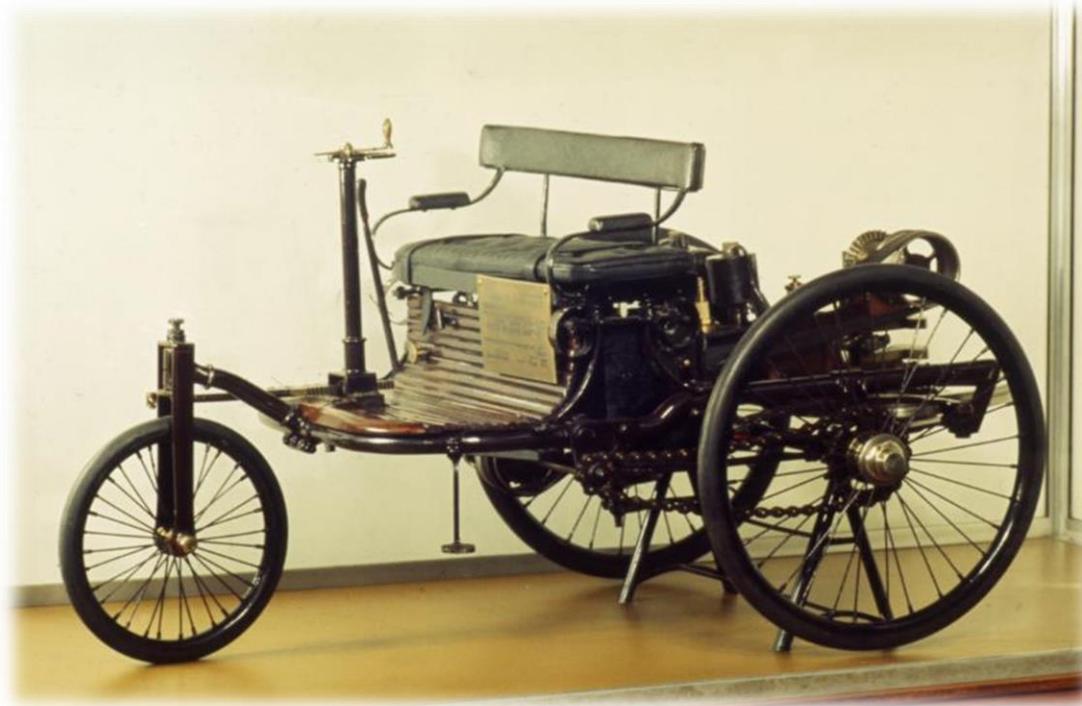
V. Depression and War

VI. End of an Era



Origins

1885 Benz Motorwagen



- Can't be traced to a single person, place or moment, *but...*
- First self-propelled vehicle designed around an internal combustion engine

Origins

1896 Duryea Runabout



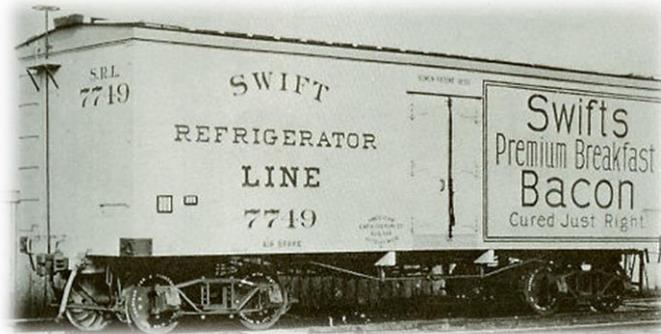
- Charles and Frank Duryea build and sell **13** units
- American auto industry is born

Detroit on the Eve

- 285,000 people
- 6x increase since 1860
- Diverse population:
1/3 foreign born
- Diverse economy



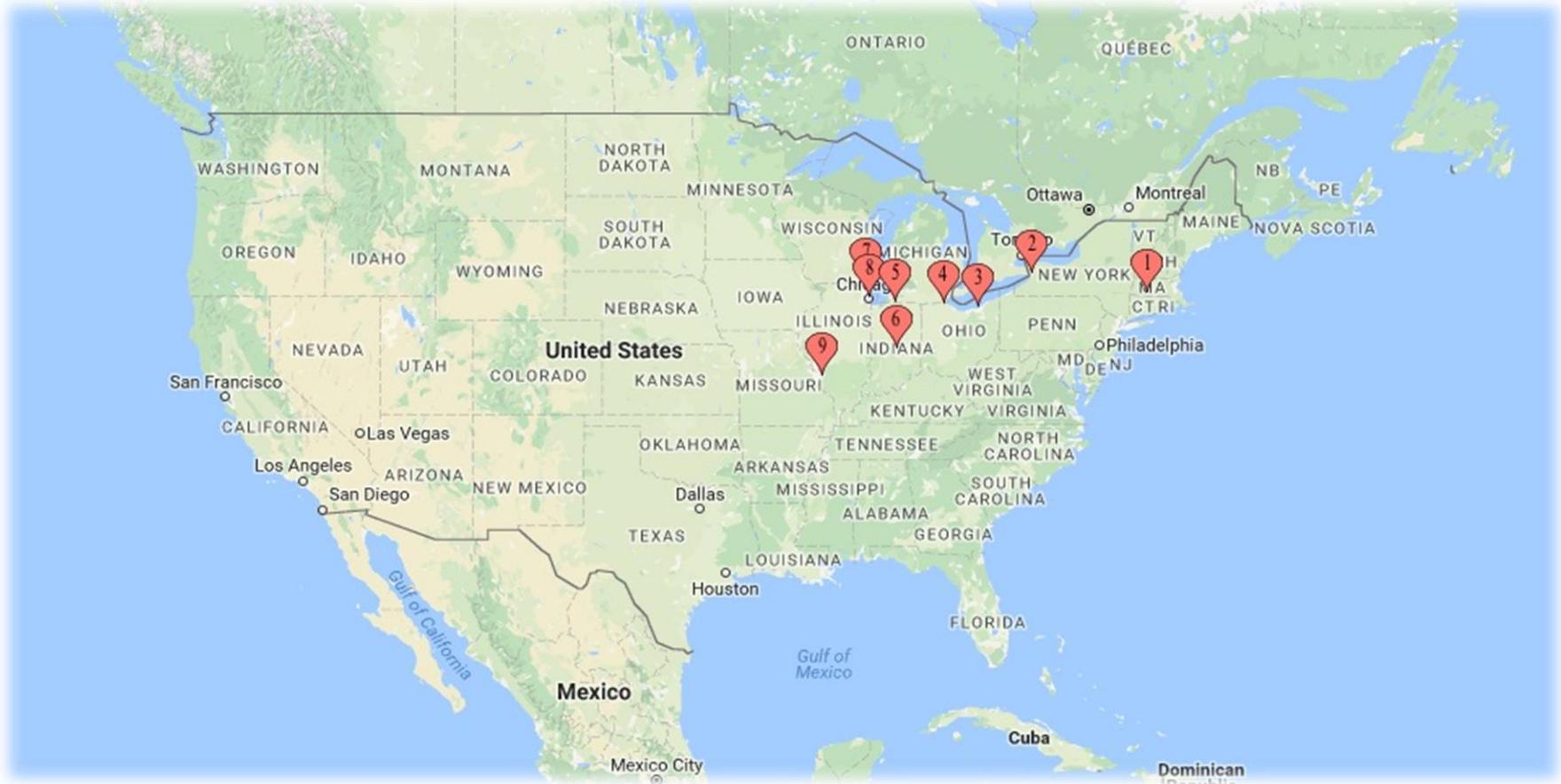
Detroit on the Eve



Why Detroit?

- **Skilled workforce**
- **Tradition of carriage manufacture and precision manufacturing**
- **Ready access to raw materials**
- **Convenient location between iron ore and coal**
- **Ready supply of capital and daring investors**

Why Detroit?



Why Detroit?

The real answer...

Why Detroit?

People!



Ransom Olds



Henry Leland



Henry Ford



David Buick



William Durant



John & Horace Dodge

Automobiles Everywhere

- More than 3,000 different automobile makes have appeared in the United States
- Some 1,500 different automobile companies
- About 1,000 of them actually produced automobiles



Why Detroit?

- Oldsmobile pushes Detroit toward front in 1901
- Detroit leads country in production volume by 1904
- Model T and GM cement Motor City's status in 1908

Auto production as a percentage value of Michigan's manufactured goods:

- 1904 - less than 2%
- 1909 - 14%
- 1914 - 38%





1903 Curved Dash Runabout



- **Founded in Lansing, but in Detroit from 1900-1905**
- **Basic and affordable at \$650; 4,000 sold in 1903**
- **Aimed at the middle class**
- **Some early experiments with assembly line**



An “Automotive University”

Board, one year \$180.00
Gasoline, one year \$35.00

Oldsmobile

THE BEST THING ON WHEELS

This graceful and practical automobile does the work of six horses at an average cost for gasoline of \$35.00 a year (10,000 miles). Board alone for one horse costs \$180.00 a year, so the economy is very evident.

Price, \$650.00

Our practical experience in motor building and the perfect mechanical construction of the Oldsmobile make it possible to obtain more power for its weight than any other machine. Any desired speed is obtained by the simple yet very efficient foot control. There is "Nothing to Watch but the Road."

There are Oldsmobile agencies in all the larger cities. Call on your nearest agent or write for illustrated book to Dept. Y.

OLDS MOTOR WORKS
OFFICES: DETROIT, MICH.
FACTORIES: DETROIT and LANSING, MICH.



- Engines supplied by Henry Leland
- Transmissions supplied by Dodge brothers
- Design work by Jonathan Maxwell
- Executives included Roy D. Chapin and Howard Coffin



1903 Runabout



- Built Cadillac from the remains of Henry Ford's second firm
- "Master of Precision"
- Founded two successful car companies
- First firm sold to GM in 1909, second to Ford in 1922



1914 Model T Touring Car



- **15 million built between 1908 and 1927**
- **\$850 at introduction, drops to low of \$260 in 1924**
- **Democratized the automobile, put the world on wheels**
- **From 1917-1924, Ford claimed half of U.S. automobile sales**
- **Built some 2 million units per year from 1923-1925**

Assembly Line

1. Interchangeable parts
 2. Subdivision of labor
 3. Work to workers
- Begins with flywheel magnetos in April 1913
 - Complete chassis by August 1913
 - Chutes and slides replaced by chain drives
 - Assembly time reduced from 12½ hours to 93 minutes



Five-Dollar Day

- Assembly line brings employee dissatisfaction
- 370% turnover rate
- Doubles \$2.30 wage
- Tedium made tolerable

There's always a catch!

- Six months' residency
- "Profit sharing"
- Sociological Department
- Mixture of altruism and advertising



**'GOLD RUSH'
IS STARTED
BY FORD'S
\$5 OFFER**

Thousands of Men Seek Employment in Detroit Factory.

Will Distribute \$10,000,000 in Semi-Monthly Bonuses.

No Employee to Receive Less than \$5 a Day.

(PATCH.)
January 7.—
view to—



1908 Model F Touring Car



- Established in 1899 by Detroit engine-builder Buick
- Backers sold to Flint interests, who brought in Durant
- Turned company around though racing and promotion
- Unlike Ford's one-car philosophy, Durant diversified
- Buick becomes General Motors cornerstone in 1908, Olds and Cadillac soon follow



1918 Touring Car



- Getting out of “Henry’s pocket”
- Slightly more expensive than Ford, but more advanced
- All-steel body, electric starter, sliding-gear transmission
- Second place to Ford by 1920



1924 Touring Car



- VP at General Motors, resigned to save failing Maxwell-Briscoe
- Reorganized as Chrysler Corporation in 1925
- Sophisticated – lightweight, powerful, 4-wheel hydraulic brakes
- 1928 – Plymouth, DeSoto founded; Dodge Brothers acquired

The Big Three

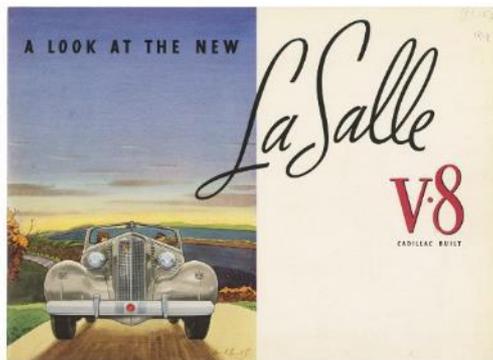
Active automobile manufacturers in the United States:

- 1908 – 253
- 1920 – 108
- 1929 – 44
- GM, Ford and Chrysler account for 80% of all American auto production by 1929
- Hudson, Nash, Packard, Studebaker, Willys-Overland at 15%
- Smaller firms split the remainder
- Door is effectively closed to new manufacturers
- The industry – and the automobile itself – reach maturity



Depression

- Annual production drops 75% between 1929 and 1932
- Automobile registrations drop only 10% over same period
- Big Three never faced serious threat to their survival
- Hudson, Nash and Packard struggled, but remained solvent
- Studebaker and Willys-Overland went into receivership
- Smaller firms were devastated



Labor

- Mixed record on labor relations
- Unions slow to catch on
- Depression changed everything
- UAW founded in 1935
- GM and Chrysler capitulated in 1937 after sit-down strikes
- Ford held out
- “Battle of the Overpass”
- Walkout in 1941 caused Ford to concede



“Arsenal of Democracy”

- Greatest source of U.S. manufacturing “know-how”
- Responsible for 1/5 of U.S. wartime production
- Some 75 different items
- 650,000 Jeeps
- Tanks, armored cars, airplanes, gliders
- Boat and aircraft engines
- Artillery, shells, machine guns, small arms ammunition, helmets, tents



End of an Era

The old guard passed as the industry transformed.

- John and Horace Dodge died in quick succession in 1920
- Billy Durant, having gone bankrupt in 1936, died in 1947
- Henry Leland, pushed out by Ford, died in 1932
- Ransom Olds, after retiring from REO in 1936, died in 1950
- David Buick, who left his namesake company shortly after Durant acquired it, died penniless in 1929
- Henry Ford, who never fully relinquished control of his company despite failing health, died in 1947



Detroit Public Library



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