

## Minard timeline

These timelines draw on the *Notice nécrologie sur M. Minard, Inspecteur général des ponts et chaussées en retraite* by V. Chevallier (1871), and the accounts of Arthur H. Robinson (1967), *The thematic maps of Charles Joseph Minard*, and Giles Palsky (1996), *Des Chiffres et des Cartes: Naissance et développement de la Cartographie Quantitative Française au XIX<sup>e</sup> siècle*.

### Early years (1780–1842): Engineer for ENPC

Born in Dijon **Mar. 27, 1781** •

Science and mathematics at Ecole Polytechnique. **1796** •

• **1797** Mathematics with Fourier, Legendre

Transfers to ENPC **1800** •

Assigned to Vlissingen: repair locks and floating docks. **1810** •

• **1811** Work interrupted by illness

Recovers; assigned to Anvers (canal) **1813** •

• **1813** Caught in siege of Anvers

Assigned to Municipal service in Paris **1815** •

• **1815** Plan to transport paving stones to Paris by canal/rail

Assigned to construction/maintenance of canals **1822** •

Saint-Quentin: leave to work for private canal firms **1827** •

Returns to state service **1830** •

• **Nov. 1, 1830** appointed superintendent of ENPC

Proposes chair in “political economy” at ENPC **1831** •

• **1831** Develops ideas on “economic geography”

Assigned teaching duties “interior navigation” **1832** •

• **1832** Course soon includes railroads

Travels to England, visiting all railroads **1833** •

• **1833** Developed ENPC lecture series on railways

Published lecture notes on railways **1834** •

Resigns as ENPC superintendant **1836** •

• **1836** All time to teaching

Appointed Divisional Inspector of ENPC **1839** •

• **1839** Extensive travel (Canal du Midi, etc.)

Ill health; assignment to 15th district (upper Loire) **1841** •

• **1842** Administrative duties: gives up formal teaching

Later years (1843–1870): Thematic Cartographer, Visual Engineer for France

- Concern with passenger travel: *parcours partial* **1843** •
- Tableaux graphique*: travel vs. distance, area ~ income **1844** •
- 1<sup>st</sup> flow map: travellers from Dijon to Mulhouse **Mar. 1845** •
- Appointed Inspector General of ENPC (age 65) **1846** •
  
- Retires from ENPC (age 70) **Mar. 27, 1851** • • **1851** Map of transport of combustible minerals, presented to Ministers of Finance, Public Works
  
- 3<sup>rd</sup> Intl. Statist. Cong. (Vienna) **1857** • • **1857** Forms of graphics includes flow maps
- 1<sup>st</sup> use of proportional pie charts on map (Butcher's meats in Paris) **1858** •
  
- Minard's maps presented to Napoleon III **1861** •
- Des tableaux graphique et des cartes figurative*: 4 plates **1862** •
- First use of comparative flow maps **1863** •
  
- Center-of-gravity map (Paris) **1865** • • **1865** Flow map of movement of passengers on principal rail-ways of Europe
- Population density of Spain, shading ~ pop. density **1866** •
- Movement of ancient languages graphic **1867** •
  
- March on Moscow and Hannibal graphic **1869** • • **1869** *La Statistique*: the applications of statistics
- Leaves Paris to escape feared Prussian seige. **Sep., 1870** • • **Oct. 24, 1870** Dies in Bordeaux (age 89)