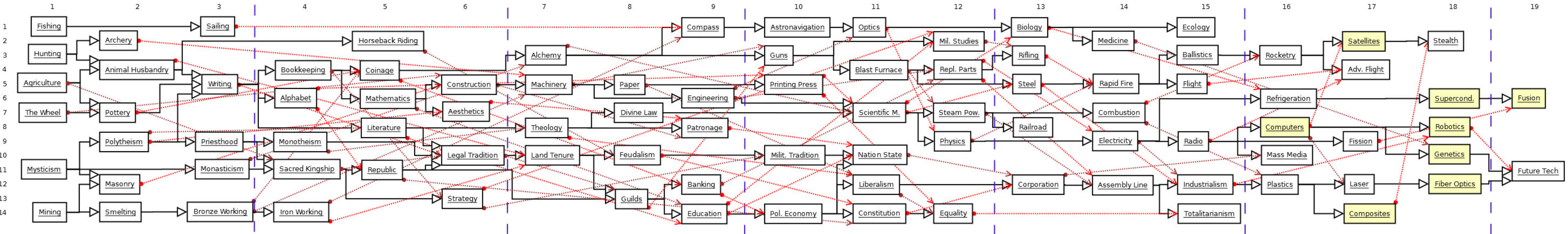


Legend

Blue dashed lines: Era boundaries  
Red dotted arrows: Additional tech requirements (two different shades of red to make them less difficult to trace)  
**Yellow shade:** Spaceship (SS) parts  
**Blue text:** Different from BtS. Mere name or research cost changes not highlighted. When a tech name is blue, then almost everything about it is different from BtS.  
**Green text:** Difference from BtS that is already implemented in AdvCiv.  
Rationales in footnotes. These are mostly about historicity, whereas `stat-changes.pdf` mostly addresses game balance.  
Alt + Left Arrow jumps back from a footnote in most PDF viewers. (The vertical space above the footnotes is a LibreOffice quirk.)  
The small row and column numbers would only be relevant for implementing the layout in XML.

Correspondence between techs:

<i>new</i>	<i>BtS</i>	<i>new</i>	<i>BtS</i>
Smelting	Metal Casting	Astronavigation	Astronomy
Monasticism	Meditation	Guns	Gunpowder
Sacred Kingship	Monarchy	Political Economy	Economics
Bookkeeping	Calendar	Nation State	Nationalism
Coinage	Currency	Blast Furnace	Chemistry
Strategy	<i>n/a</i>	Military Studies	Military Science
Republic	Drama	Ballistics	Artillery
Alchemy	Philosophy	Rapid Fire	<i>n/a</i>
Land Tenure	Civil Service	Equality	Democracy+Communism
Divine Law	Divine Right	Totalitarianism	Fascism+Communism
Patronage	Music	<i>total: 93</i>	<i>92</i>



- Fishing (60): can work Coast, Work Boat, **faster movement** along rivers<sup>1</sup>
- Hunting (60):<sup>-2</sup> Scout, Camp
- Agriculture (60): Farm, **Tree Plantation**<sup>3</sup>
- Wheel (60): Road, Chariot (with Horse)
- Mysticism (60): Monument, Stonehenge, reveal **Incense**<sup>3</sup>
- Mining (60): Mine, **can clear** Forest and Jungle for no yield<sup>4</sup>
- Archery (60): Archer, **Great Wall** (req. Walls)<sup>5</sup>
- Animal Husbandry (100): Pasture, reveal Horse and **Silk**<sup>3</sup>, **Stable** (with Horse or Ivory)<sup>5</sup>
- Pottery (90): Granary (with **Agriculture**)<sup>7</sup>, Cottage
- Polytheism (70):<sup>-8</sup> **Temple**<sup>9</sup>, found Hinduism **if** discoverer has met the founder of Buddhism or if Buddhism not yet founded<sup>10</sup>
- Masonry (60):<sup>-5</sup> Quarry, Walls, Pyramids<sup>11</sup>
- Smelting** (70):<sup>-12</sup> reveal Copper<sup>13</sup>, Spearman (with Hunting, Copper or Iron)<sup>14</sup>, Workshop<sup>15</sup>
- Sailing (120):<sup>-16</sup> Galley<sup>17</sup>, Lighthouse, trade along unowned Coast, Moai Statues (with Masonry)
- Writing (160): Library, Open Borders
- Priesthood (80): **Temple of Artemis**, Oracle,<sup>18</sup> **Culture slider**<sup>19</sup>
- Monasticism (90):<sup>-20</sup> Monastery<sup>21</sup>, found Buddhism **if** discoverer knows the founder of Hinduism or if Hinduism not yet founded<sup>10</sup>
- Bronze Working (80):<sup>-22</sup> Axeman (with Copper or Iron), 20 yield from chopping Forest, **Trireme** (with Sailing)
- Bookkeeping** (160):<sup>-23</sup> Market, gold trading,<sup>24</sup> Temple of Kukulcan (with Agriculture)<sup>25</sup>
- Alphabet (200): Spy, **Espionage slider**<sup>26</sup>, Commando promotion<sup>27</sup>, build Research, increases tech **diffusion**<sup>28</sup>
- Monotheism (150):<sup>-29</sup> Organized Religion, **Winery**<sup>30</sup>, found Judaism **unless**<sup>31</sup> discoverer owns a Holy City
- Sacred Kingship (160):<sup>-32</sup> **Forced Labor**<sup>33</sup>, **Barracks**<sup>34</sup>, Dynastic Rule (with Writing)<sup>35</sup>
- Iron Working (190): Swordsman (with Iron), reveal Iron, **Forge**<sup>36</sup>
- Horseback Riding (230):<sup>-5</sup> Horse Archer (with Archery, Horse)
- Coinage (320):<sup>-37</sup> +1 trade route, build Wealth, **Shwedagon Paya**<sup>38</sup> (with Monasticism)
- Mathematics (240):<sup>-39</sup> Aqueduct (with **Mining**<sup>40</sup>), Hanging Gardens (with Aqueduct), **Great Lighthouse**<sup>41</sup> (with Lighthouse), **centers** the map<sup>42</sup>
- Literature (350):<sup>-43</sup> Heroic Epic (with Library)<sup>44</sup>, Great Library (with Library, **Mathematics**<sup>45</sup>), **Theater**<sup>46</sup>
- Republic** (360):<sup>-47</sup> Parthenon<sup>48</sup>, Arena (with Masonry)<sup>49</sup>, Academy<sup>50</sup>, Triumphal Arch (with Construction)<sup>51</sup>
- Construction (400): Catapult (with **Archery**<sup>53</sup>), Bridge building, **Harbor**<sup>53</sup> (Sailing), **Colossus** (with Harbor, Iron Working)<sup>54</sup>
- Aesthetics (280):<sup>-43</sup> <sup>55</sup> **Mausoleum of Mausolos**<sup>56</sup>, Statue of Zeus, **Angkor Wat** (with Priesthood)<sup>57</sup>
- Legal Tradition (400):<sup>-58</sup> Courthouse, Caste System, found Confucianism **if** discoverer owns a Taoist city or if Taoism not yet founded<sup>59</sup>, **Vassal agreement**<sup>60</sup>
- Strategy** (300):<sup>-61</sup> War Elephant<sup>62</sup> (with Horseback Riding, Ivory), Guerrilla promotion<sup>63</sup>, free Great General if first to discover<sup>64</sup>, Fort<sup>65</sup>
- Alchemy (700):<sup>-66</sup> Pacifism, +10% research from **Monastery**<sup>67</sup>, found Taoism **if** discoverer owns a Confucian city or if Confucianism not yet founded<sup>59</sup>
- Machinery (800):<sup>-68</sup> Watermill, **Lumbermill**, **+50% chopping** yield,<sup>69</sup> Crossbowman (with Iron or **Copper**)<sup>70</sup>
- Theology (800):<sup>-71</sup> Apostolic Palace, Hagia Sophia (with **Construction**<sup>72</sup>), found Christianity (in a **Jewish** city if one exists<sup>73</sup>)
- Land Tenure** (800):<sup>-74</sup> Serfdom<sup>75</sup>, can build Farm on Grassland without irrigation<sup>76</sup>
- Paper (1200):<sup>-77</sup> University of Sankore, **Bureaucracy** (with Legal Tradition)<sup>78</sup>, Forbidden Palace<sup>79</sup> (with Courthouses)
- Divine Law (1000):<sup>-80</sup> **Theocracy**<sup>81</sup>, Spiral Minaret, found Islam (in a **Jewish or Christian** city if one exists)<sup>73</sup>
- Feudalism (800): Longbow (with Archery)<sup>82</sup>, **Knight** (with Machinery, Iron, Horse)<sup>83</sup>, **Castle**<sup>84</sup>, Vassalage civic
- Guilds (1100):<sup>-85</sup> **Maceman** (with Machinery, Iron)<sup>86</sup>, **Field Plantation**<sup>87</sup>, Workshop +1 production<sup>88</sup>
- Compass (1400):<sup>-89</sup> **Map trading**<sup>90</sup>, Explorer, **Grocer** (with Guilds)<sup>91</sup>, **Whaling Boats**<sup>92</sup>
- Engineering (1500): **Windmill**<sup>93</sup>, Trebuchet, Notre Dame (with Theology), **Taj Mahal** (with Divine Law)<sup>94</sup>
- Patronage (1300):<sup>-95</sup> Sistine Chapel, build Culture, Cathedral
- Banking (1500): Bank, **Pikeman**<sup>86</sup>, **Great Merchant** if first to discover<sup>96</sup>
- Education (1400):<sup>-97</sup> University, Oxford University (with University)
- Astronavigation (1900):<sup>-98</sup> Caravel (with **Machinery**)<sup>99</sup>, **Navigation II** promotion<sup>100</sup>, **+1 sight** on water<sup>101</sup>
- Guns (2400):<sup>-102</sup> Muskettman, Pinch promotion
- Printing Press (2000): +1 commerce from Village and Town, **obs. Great Library**<sup>103</sup>
- Military Tradition (2400):<sup>-104</sup> Cuirassier (with Guns, Horse), **Kremlin**<sup>105</sup>, **Militarism**<sup>106</sup>, Defensive Pact<sup>107</sup>
- Political Economy** (2100):<sup>-108</sup> Mercantilism, +1 production from Lumbermill<sup>109</sup>, Customs House<sup>110</sup> (with Harbor), Versailles<sup>111</sup>
- Optics (2500):<sup>-112</sup> Galleon, **Privateer** (with Guns and Copper or Iron)<sup>113</sup>, trade across Ocean, **Lookout** promotion for naval units<sup>114</sup>, **obs. Great Lighthouse**<sup>115</sup>
- Blast Furnace** (2700):<sup>-116</sup> Cannon (with Iron)<sup>117</sup>, Frigate (with Optics and Iron), Grenadier<sup>118</sup>, Barrage promotion<sup>119</sup>, **obs. Colossus**<sup>120</sup>
- Scientific Method (2500):<sup>-121</sup> **can impart tech**<sup>122</sup>, **+1 research per specialist**<sup>123</sup>, **obs. Statue of Zeus, Angkor Wat**<sup>124</sup> and Monastery
- Nation State** (2600):<sup>-125</sup> Hermitage, Globe Theater (with Theater)<sup>126</sup>, free Great Artist if first to discover<sup>127</sup>, Cities don't demand protection<sup>128</sup>
- Liberalism (2500): **Free Market**,<sup>129</sup> Free Religion, **obs. Castle**<sup>130</sup>, **Oracle**<sup>131</sup> and **Temple of Artemis**<sup>132</sup>
- Constitution (2700):<sup>-133</sup> Jail, **Federation** (with Nation State)<sup>134</sup>, Representation, **obs. Monument, Stonehenge**<sup>135</sup> and Mausoleum of Mausolos<sup>136</sup>
- Military Studies (2900):<sup>-137</sup> Ship of the Line (with Optics, Blast Furnace and Iron), Military Academy (with **Barracks**)<sup>138</sup>, **+1 movement on Roads**<sup>139</sup> and along rivers<sup>140</sup>, Blitz promotion<sup>141</sup>
- Replaceable Parts (3300):<sup>-142</sup> **Drydock**<sup>143</sup>, **+1 production** from Windmill, Watermill and **Workshop**<sup>144</sup>
- Steam Power (3400):<sup>-145</sup> Levee<sup>146</sup>, **Ironclad** (with Iron and Coal)<sup>147</sup>, reveal Coal, Farms and (flat) Cities **spread Irrigation**<sup>148</sup>
- Physics (2700):<sup>-149</sup> **Observatory**<sup>150</sup>, free Great Scientist if first to discover
- Equality** (3100):<sup>-151</sup> Emancipation, Police Headquarters, Security Bureau,<sup>152</sup> Statue of Liberty (with Harbor, and must be in Emancipation and Free Religion)<sup>153</sup>, **obs. Deer**<sup>154</sup>
- Biology (4700):<sup>-155</sup> +1 food from Farm, can build Farms without irrigation, **Cereal Mills** Executive (with Corporation, University)<sup>156</sup>, **obs. Temple of Kukulcan**<sup>157</sup>
- Rifling (4000):<sup>-158</sup> Rifleman, Cavalry (with Military Tradition, Horse)
- Steel** (4200):<sup>-159</sup> Bunker<sup>160</sup>, Steelworks (with Iron, Coal, Forge)<sup>161</sup>, Cristo Redentor (with Theology)<sup>162</sup>, construct Ancient and Classical buildings faster<sup>163</sup>, **Creative Constructions Executive**<sup>164</sup> (with Corporation, University)
- Railroad (3700):<sup>-166</sup> Rail (with Coal or Oil), **Public Transportation** (with Oil)<sup>166</sup>, can **trade Crab**<sup>167</sup>, Mining Inc. Executive (with Corporation, University), **obs. Walls**<sup>168</sup>
- Corporation (4200):<sup>-169</sup> Wall Street (with Bank), +1 trade route, **State Property** (with Equality)<sup>170</sup>, can **train Executives** at Universities<sup>171</sup>, **obs. Great Wall**<sup>172</sup>
- Medicine (4200): Hospital (with power), Red Cross (with Hospital), **Fallout Shelter** (with Steel, Manhattan Project)<sup>173</sup>, **Medic III** promotion<sup>174</sup>
- Rapid Fire** (4800): Machine Gun,<sup>175</sup> Field Gun<sup>176</sup>, Interception I<sup>177</sup> and Ambush<sup>178</sup> promotions, Mount Rushmore<sup>179</sup>
- Combustion (4100):<sup>-180</sup> **reveal Oil**<sup>181</sup>, Oil Well, **Airship** (with Physics)<sup>182</sup>, **Std. Ethanol Executive** (with Corporation, University)<sup>183</sup>, **obs. Whale, Dye**<sup>184</sup>
- Electricity (5000):<sup>-185</sup> reveal **Aluminum**<sup>186</sup>, Broadway (with Theater), **+1 commerce** from Watermill<sup>187</sup>, **Coal Plant** (with Coal)<sup>188</sup>, **Hydroplant** (with Steel), **Three Gorges Dam** (with Steel)<sup>189</sup>
- Assembly Line (5200):<sup>-190</sup> Factory (with Coal, Oil or power)<sup>191</sup>, Infantry (with **Rapid Fire**)<sup>192</sup>, **Universal Suffrage** (with Equality)<sup>193</sup>
- Ecology** (5100): Environmentalism<sup>194</sup>, Treatment Plant<sup>195</sup>, Preserve Forest, National Park,<sup>196</sup> **obs. Ivory**<sup>197</sup>
- Ballistics** (5500):<sup>-198</sup> Battleship (with Coal or Oil or Uranium), Destroyer (with Radio and Coal or Oil),<sup>199</sup> Tank (with Assembly Line, Railroad and Oil)<sup>200</sup>
- Flight (7000):<sup>-201</sup> Fighter (with Oil), **Bomber** (with Radio<sup>202</sup>, Oil and **Aluminum**<sup>203</sup>), Carrier (with **Coal** or Oil or Uranium), **Paratrooper** (with Silk or Plastics)<sup>204</sup>
- Radio (7800):<sup>-206</sup> **Attack Submarine** (Oil or Uranium)<sup>206</sup>, Rock'n'Roll (with **Arena**<sup>49</sup>, **power**), Eiffel Tower (with Forge), reveal **Uranium**<sup>207</sup>, Air Recon can **reveal Submarines**<sup>208</sup>
- Industrialism (7200):<sup>-209</sup> Industrial Park (with Factory, **power**), Marine (with **Rapid Fire**)<sup>210</sup>, **Transport** (with Coal or Oil)<sup>211</sup>, **Pentagon**<sup>212</sup>, **Aluminum Co.** Executive (with University)<sup>213</sup>
- Totalitarianism (5500):<sup>-214</sup> Police State, Permanent Alliance, **Intelligence Agency**, free Great **Spy** if first to discover<sup>215</sup>, **obs. Parthenon**<sup>116</sup>
- Rocketry (8500):<sup>-217</sup> SAM Infantry (with **Radio**<sup>218</sup>), **Anti-Tank**<sup>219</sup>, Guided Missile (with **Electricity**<sup>220</sup>), **Nuclear Submarine** (with Uranium)<sup>219</sup>, **Missile Cruiser** (with Computers and Oil or Uranium)<sup>221</sup>
- Refrigeration (8000): Supermarket (with power), **+1 food** from Fishing Boats<sup>222</sup>, **Sid's Sushi** Executive (with Corporation, University)<sup>223</sup>
- Computers** (8400):<sup>-224</sup> 100% conversion rate from Processes<sup>225</sup>, **SS Life Support** (with Ecology)<sup>226</sup>
- Mass Media (9000)<sup>-227</sup>: United Nations, Hollywood (with **Broadcast Tower**), Broadcast Tower (with power), **Jubilant Jewelers** Executive (with Corporation, University)<sup>228</sup>, **obs. Apostolic Palace**
- Plastics (8500):<sup>-229</sup> **+1 trade route** from Harbor<sup>230</sup>, **+3 happiness** in all cities<sup>231</sup>, Offshore Platform<sup>232</sup>, **obs. Fur, Silk**<sup>233</sup>
- Satellites (9000):<sup>-234</sup> **Apollo Project** (with Plastics)<sup>235</sup>, reveal map<sup>236</sup>, **SDI** (with Manhattan Project)<sup>237</sup>
- Advanced Flight (11000):<sup>-238</sup> Gunship (with Oil); Jet Fighter (with Aluminum, Oil), **Airport** (with Oil)<sup>239</sup>, **obs. Stable and Horse**<sup>240</sup>
- Fission (9500):<sup>-241</sup> Manhattan Project (with **Nuclear Plant**), Tactical Nuke (with Rocketry, Uranium and Manhattan Project), **ICBM** (with **Satellites**<sup>242</sup>, Uranium and Manhattan Project), Nuclear Plant (with Uranium)
- Laser (11000):<sup>-243</sup> Mobile SAM (with Rocketry, Oil), **Howitzer**<sup>244</sup> (with Ballistics and Oil), **Space Elevator** (with Satellites)<sup>245</sup>
- Composites (11000):<sup>-246</sup> **SS Casing**, **Mechanized Infantry** (with Rapid Fire, Aluminum, Oil)<sup>247</sup>, Modern Armor (with **Laser, Ballistics**, Oil)<sup>248</sup>
- Stealth (12000):<sup>-249</sup> Stealth Bomber (with Advanced Flight, Aluminum, Oil), Stealth Destroyer (with Oil or Uranium), Air Recon can **reveal stealth ships**<sup>250</sup>
- Superconductors (12000): **SS Thrusters**, Particle Accelerator (with Fission and power)<sup>251</sup>
- Robotics** (10000): **SS Docking Bay**, +1 free Engineer from Industrial Park<sup>252</sup>
- Genetics (12000):<sup>-253</sup> **SS Stasis Chamber** (with Refrigeration)<sup>254</sup>, **+2 health, +1 food** in Grassland tiles with at least 5 food<sup>255</sup>
- Fiber Optics (12000):<sup>-256</sup> **SS Cockpit**, **Internet**<sup>257</sup>
- Fusion (12000):<sup>-258</sup> **SS Engine**, free Great Engineer<sup>259</sup> if first to discover
- Future Tech (10000):<sup>-260</sup> +1 health, +1 happiness







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