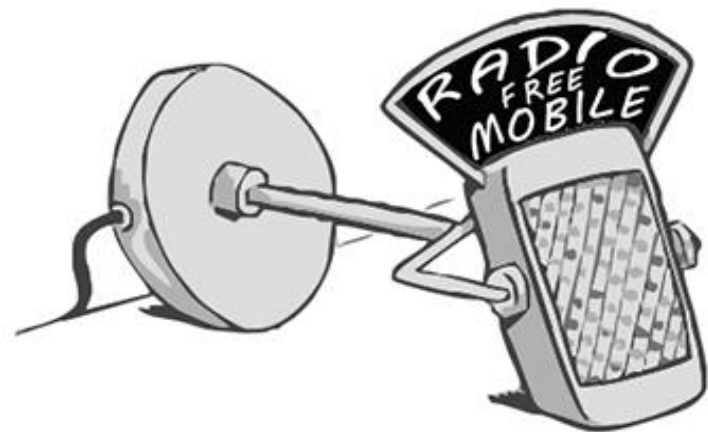


# Mobile Ecosystems

## Men and boys



- Artificial Intelligence is finally coming of age....
- ....which has driven all the ecosystems to invest heavily.
- However, AI remains at a very early stage...
- ...with none of the three big problems of AI close to being solved.
- Digital assistants are the first real deployment of AI in the ecosystem.
- Search engines lead with Amazon, Microsoft and Apple trying to catch up
- Facebook is the laggard which will have severe consequences if not fixed.

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**16<sup>th</sup> December 2016**



# Mobile Ecosystems

## Men and boys

16th December 2016

**The difference between men and boys will be the brains of their toys. Artificial Intelligence promises to substantially improve the Digital Life services offered by the ecosystems which has underpinned a period of feverish investment. Despite this activity, developments are at a very early stage with none of the big challenges of AI being close to being solved. It is the search engines that are ahead in AI followed by Apple, Microsoft and Amazon. AI remains the Achilles heel of Facebook.**

- **Artificial Intelligence** appears at last to be coming of age. The prospect of making real returns on investment has driven all of the ecosystems to invest heavily.
- **Three goals for AI.** AI is still in its infancy with three big issues to be solved. These are: 1) the ability to train AIs using much less data than today, 2) the creation of an AI that can take what it has learned from one task and apply it to another and 3) the creation of AI that can build its own models rather than relying on humans to do it. Performance in solving these three problems is likely to separate the men from the boys in the long-term.
- **Early days.** RFM finds that most claims to AI are simply advanced statistics and that true AI is at a very early stage. Even the best have made little headway with the three goals of AI.
- **Law of Robotics.** There is no doubt that good quality AI has the potential to significantly improve the quality of Digital Life services offered by the different ecosystems. Consequently, RFM sees AI being a major differentiator and now includes an assessment of AI as Law of Robotics No. 8: An ecosystem must have good artificial intelligence.
- **Digital Assistants** are the first real deployment of AI in ecosystems and are being offered free in order to generate the data that is needed to continually make them better. Consequently, digital assistants are a good first yardstick of each ecosystem's competence in AI.
- **Search engines.** AI still requires vast amounts of human labour, great skill and copious data to develop which hands a substantial advantage to those that have been doing it the longest. Understanding data has been the livelihood of the search engines for many years. This is the main reason why it is Google, Baidu and Yandex that are the global leaders in AI and all of them are aggressively investing to maintain their advantage.
- **Fast followers** are made up by Microsoft, Apple and Amazon. Both Microsoft and Amazon have scope to earn a return on AI in their businesses that are not part of the ecosystem. Apple appears to have voluntarily hobbled its AI development with differential privacy.
- **Facebook is the laggard** with one of the weakest positions in AI globally. RFM research indicates that Facebook has real problems with automation. These have to be fixed otherwise providing customised services to 1.8bn users manually will be cripplingly expensive.

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