

Ten Trends for the Tens



A new decade is right around the corner. I expect we'll start to see a lot of prognostication soon, so I will attempt to get out ahead of the crowd. At Catalyst we research growth industries and invest in businesses that have recurring, advertising or subscription-based revenue. Growth industries ride the big product adoption trends. Here are ten big industry trends we intend to capitalize on:

- 1. Applications move to the "cloud"** – An obvious prediction, but its importance cannot be overstated. Software and content will continue to migrate to the internet, or the "cloud". Devices on the edge will therefore be able to simplify and specialize, like net books for web surfing, iPods for listening to music, Blackberrys for accessing corporate information, Kindles for reading. Business applications will rapidly move to the internet, where they are cheaper to deliver, more frequently upgraded and will allow access to more real time information.
- 2. The tribal internet** – Social networking and internet content will evolve into networks of sites and information streams focused around common interests. Whether it's for work, hobbies or issue advocacy, interest groups will form virtual "tribes" online, sharing content, ideas, opinions, advice and information among themselves. Magazines, blogs, email newsletters and video content are already interlinked and shared and promoted via RSS feeds and social networks like Twitter, LinkedIn, and Facebook. Because these tribes are built around natural affinities, in many ways they will have a more powerful hold on us than our existing groups based on schools and location. Marketers will not be successful with old-fashioned advertising that interrupts this flow of content. Successful marketers will be those that are able to join and gain the trust of the tribes, where people WANT to receive the marketing message.
- 3. The internet is all around you** – As applications, content and

communities move to the web, we become increasingly dependent on the web and will demand access everywhere and at all times. The functionality of smartphones and other wireless access devices will keep increasing, so that we can wirelessly do most of what we currently do on the computer. Wireless networks will dramatically increase the amount of data capacity and will at least rival the speeds of today's DSL lines. We will get to the point that we're connected to the internet 24/7, both for work and for fun.

- 4. The web gets smart, really smart** – As more information flows through the internet, parallel processing technology will enable an internet that understands the relevance of information as it appears in real time. The confluence of all of this data and these technologies will necessitate sophisticated algorithmic models to aid interpretation and decision making. Many of the great advances will be in what is today called business intelligence or business analytics. The speed in which managers and marketers can react to changes in the business environment will accelerate dramatically.
- 5. Sensors, sensors everywhere** – With a smart web analyzing data and ubiquitous wireless network access, internet-connected sensors will be measuring all sorts of data. Our vital signs, energy usage, soil moisture, traffic patterns, manufacturing efficiency...it will all be tracked remotely and analyzed in real time and fed into the Smart Web, increasing business productivity. Some have called this the "Internet of Machines", "machine-to-machine communications" or "M2M". Asset productivity and utilization will soar immensely, reducing the relative demand for business investment overall. The combination of web-based software, the Smart Web and M2M will create one of the fastest leaps in worker productivity in human history over the next 10-20 years.
- 6. The decentralization of medicine** – The current hospital-centric health care system is an inefficient amalgamation of disparate systems that do not communicate with each other. Networked medicine, information record standards and focus on prevention and wellness could break it all apart. Data tracking can revolutionize disease management, nutrition, exercise, home health care, and remote medicine. The centralized delivery model is more of an industrial-age organization form relative to the networked-based economy of today. The use of hospitals will decline in favor of doctor house calls, "video visits" and visits to (or visits from) specialists loaded with high tech equipment and software.
- 7. The decentralization of education** – The current one-size-fits-all educational system seems even more industrial age than our health care system. People learn in different ways and follow different life paths. Parents will want more choice in programs for kids. Adults will want more access to programs that help advance their careers. More learning will be done online and outside of a "school". Apprenticeships will make a comeback. More charter schools and private schools will be built. More will be invested in early childhood education. A much larger percentage of colleges and universities will be specialized and "for profit", while many non-profit universities will leverage their brands to broaden their revenue streams to include some for-profit activities. Americans will have more opportunity to invest in themselves and to make themselves more productive.

- 8. Building the “electricity superhighway”** – The shift away from fossil fuels will increase our reliance on electricity, particularly in transportation. The smart grid initiatives pursued today are equivalent to the Telecom Act of 1996 – a catalyst that will lead to the transformation of the utility industry as the electricity superhighway gets built out. The implementation of a smart grid will allow for more efficient and balanced use of the electrical grid. Energy storage systems will take energy from intermittent sources like sun and wind or from traditional power plants during off-peak times for use during peak times. Power will continue to be sold from utility to consumer, but also flow from small-scale power sources like rooftop solar panels back to the utility when not being consumed. Small-scale energy storage systems like reversible fuel cells or batteries could do away with the whole concept of peak/off-peak pricing altogether. The move to electric or hybrid cars, combined with investments in more electrical generation capacity (from nuclear, alternatives and natural gas) and a smart electrical grid will dramatically reduce the largest cause of the US trade deficit: our reliance on foreign oil.
- 9. The integration of transportation** – If the last 50 years in US urban development were about the buildout of the suburbs and the last 20 years were about the buildout of the outer suburbs, or “exurbs”, then the next 10-20 years will be about lashing together our far-flung metropolises with an integrated transportation network. There will be a great deal of investment in rail, both commuter rail and inter-city rail (within 300 miles). Rail will also be more integrated with our other transportation hubs. Rather than a trend of suburbanites moving to the cities (a “trend” not supported by any data), the city will likely move to the suburbs as density increases and transportation patterns evolve. Very light jets, or “VLJs” will get rolled out, allowing for more direct flights between non-hub destinations. There will be a movement in favor of time-shifting commutes and increased adoption of telecommuting. A more integrated and efficient transportation network will benefit both the environment and the productivity of the American workforce, which currently wastes \$87 billion per year in fuel and lost productivity by sitting in traffic jams, according to a 2009 report by the Texas Transportation Institute.
- 10. Workers of the world, connect!** – Tom Hayes wrote an interesting new book called *Jump Point: How Network Culture is Revolutionizing Business*, that hypothesizes how the world will change when the 3 billionth person (~50% of the world’s population) becomes connected to the internet in 2011. Change will accelerate and volatility will increase. New companies and ideas will arise seemingly out of nowhere and spread around the world in no time (see Twitter) and old, steady industries will appear to collapse in the blink of an eye (see magazines). These ideas and companies can come from anywhere in the world. Since young people are often the most creative inventors of new ideas, and the vast bulk of young people reside in the emerging world, many of the great new ideas of the decade will flow from the emerging world. Governments and companies that rely on hierarchy and control will struggle to adapt to a world of decentralization and volatility. While individuals will be empowered for good (blogging) and for ill (terrorism), they will also be more connected as a global community (see

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Facebook). Brace yourselves for a wild and interesting ride.

At Catalyst we intend to capitalize on these trends. That means we will continue to invest in software-as-a-service, managed hosting, data centers, vertical ad networks, online marketing, smartphone applications, wireless infrastructure, machine-to-machine communications services, for-profit education, education software, and potentially remote medical services, medical software, smart grid services, energy efficiency services, and next-gen transportation services and infrastructure.

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