



2020 President-Elect Nominee Statement Region 10

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Valletta, Malta



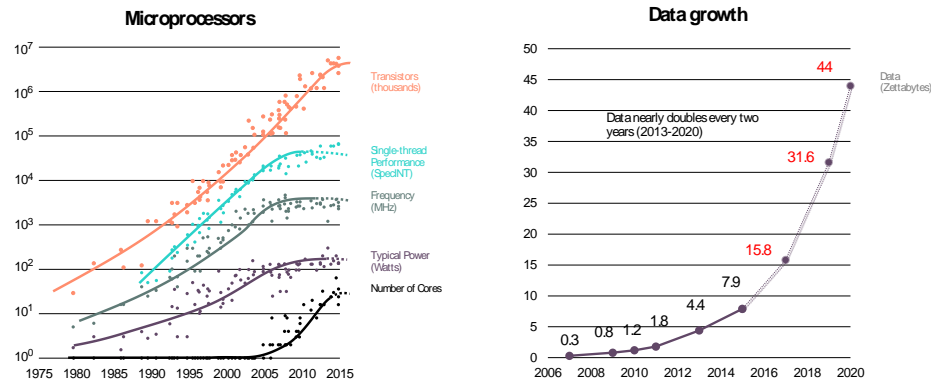
TECHNOLOGY INFLECTION POINT:

Many changes, and this is the time to make a lasting impact

Technology

Global Challenges

End of Moore's Law and Data Growth



- Concerns of supply chain hacks
- Spectre and Meltdown vulnerabilities 
- Race to Exascale: China, Europe, US
- Sustainability issues: global warming
- Global hunger: solution through supply chain?
- Talent training, recruiting, evolving

- Power AI: explosion of HW accelerators
- Automotive: self-driving cars: Tesla, Baidu, Audi
- Quantum Computing, Blockchain, AR/VR
- Technology convergence: SW-defined, hpc/data

IEEE is at the heart of the technology revolution, with impact on humanity

However, IEEE is not acting with the same sense of urgency as industry is!

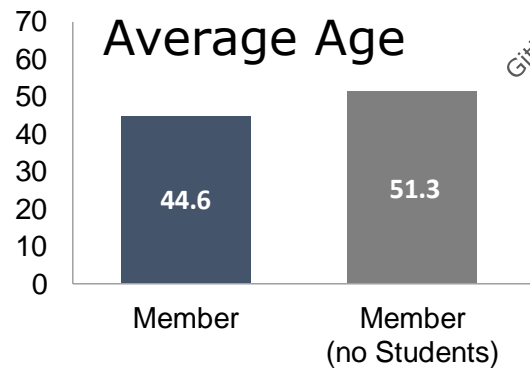
IEEE TODAY

#members

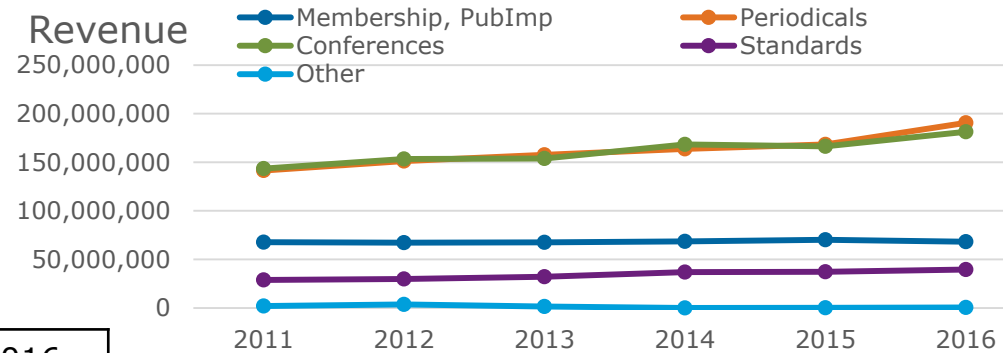


Survey of Membership	2000	2004	2008	2012	2016
Private industry	60%	54%	52%	44%	39%
Educational Institutions	14%	17%	18%	24%	29%

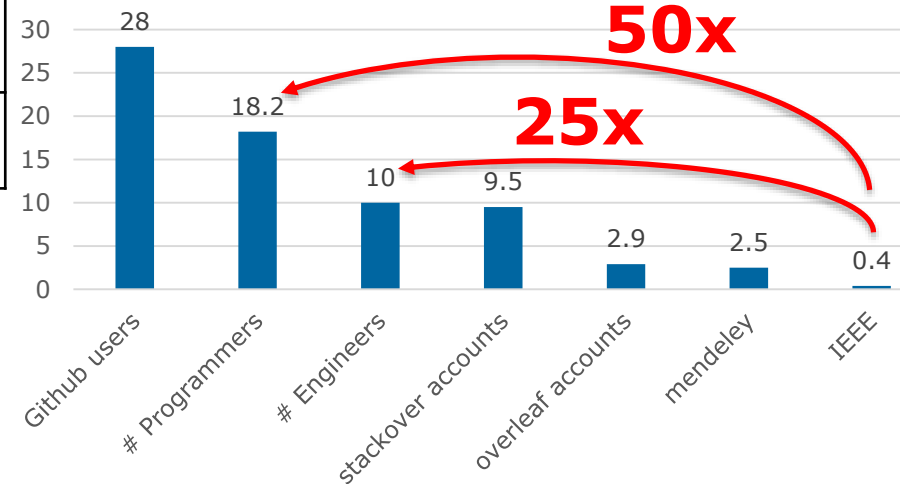
Fellow Elevation Type ('07-'17)	%
Researcher/Scientist	80.8
Technical Leader	10.4
App. Engineer/Practitioner	5.9
Educator	2.9



Revenue



Number of Members in Millions

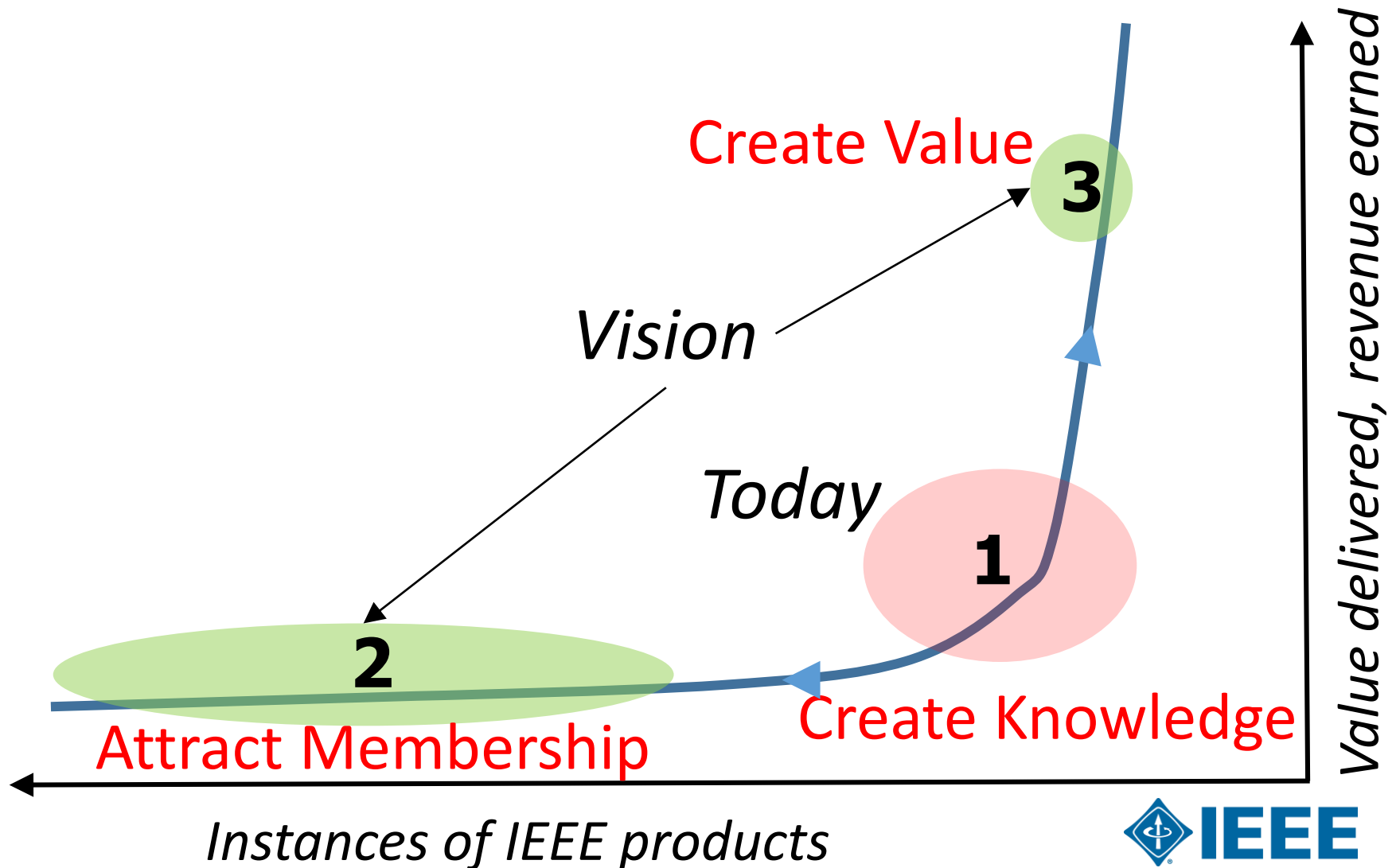


2017 Rank	Country	2017	2007	% Change
1	USA	180,952	212,838	-14.98%
2	India	52,410	23,496	123.06%
3	China	18,919	4,897	286.34%

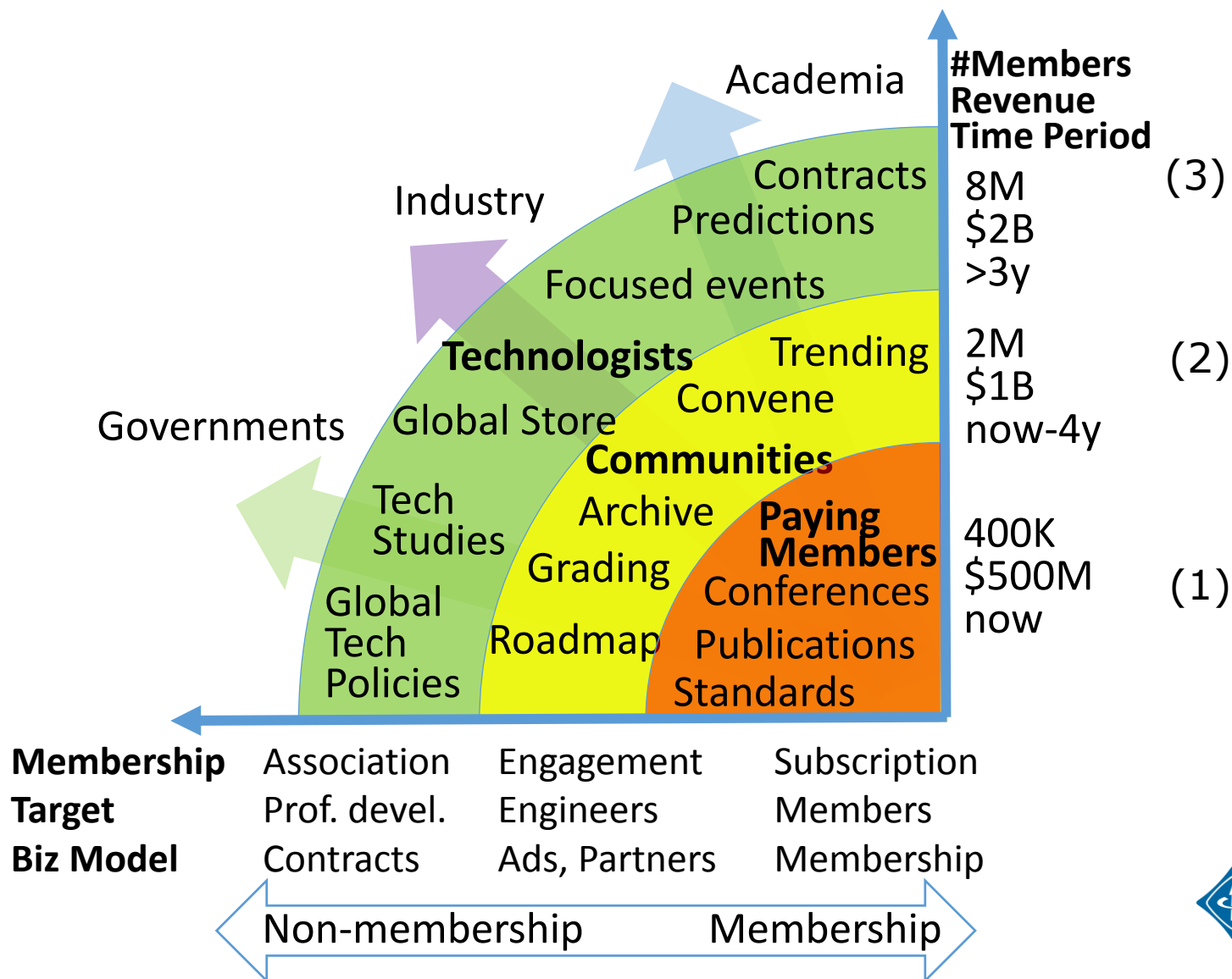
STATEMENT: IEEE has not kept pace with the changing profession. It must adjust or gradually diminish in relevance!

- **Relevance to industry, and tie better to academia and government, e.g.:**
 - Consulting services to corporate, government, e.g. cross-technology evaluation
 - Practitioner reports and trend papers of timely, practical value
 - Host modern events targeted to industry, culminating in Industry Congress
- **Innovate IEEE by introducing offerings, e.g.:**
 - Recruit members from 18M SW developers, talent mgmt., new member grades
 - Tighter workflow connecting TAB and SA for right-timing of agile standards
 - Corporate Partnerships with SMBs and startups, in addition to enterprises
- **Global Membership, expand into Asia/Africa, strengthen Americas/Europe:**
 - Grow IEEE-USA into IEEE-Global-Policy, extend with IEEE-Asia, IEEE-Europe
 - Collaborate with sister organizations, such as NAE, AAAI, ACM, ASM

- VISION:**
- 1) Protect, preserve the core (membership)
 - 2) Transition to long-tail (by engagement)
 - 3) Incubate high-end services (by association)



MEMBERSHIP VISION



IEEE VISION: IEEE, a preferred technology advisor to corporations, governments, NGOs

- IEEE should connect all those we serve to our global technical community
- This means delivering high value, high margin services, e.g.

IEEE advising the UN on application of AI to automotive using neuromorphic computing with ethical constraints

- To reach this vision requires three phases

1. TRADITIONAL: Our credibility relies on us preserving our core products which are converging: journals and conferences, standards and publications, etc.
2. BY ENGAGEMENT: converged products to the long tail (tools, e.g. HotCRP, ShareLatex, Mendeley-like developer networks, certified citations, etc.)
 - Delivering standardized/unified products to the long-tail requires automated customization at low price, low touch, and at large scale.
3. BY ASSOCIATION: High margin services require new skills, partners, high touch, markets; this will take effort, but it will position IEEE to reach its full potential
 - Realizing an ambitious new vision is a multi-year process and requires members and staff to share that vision

Innovation in Standards

- **New opportunities from new standards growing countries (China, India)**
 - High speed trains, UAVs (drones), SmartGrid
 - Uncharted territory with AI chips, huge implications on AR/VR
- **New technologies demand reverse cycle of technology->standards**
 - Standards-driven Technical Communities created from standards activities
 - AI, post-Moore's, ethics considerations, require broader, innovative standards
 - Pre-standardization activities: roadmapping, white papers, rapid reaction, etc.
 - Light consensus building: open source, industry consortia, SW interoperability
- **Perpetual adaptation of processes, people, and locations**
 - Increased presence in technology-savvy regions: Silicon Valley, Chicago, Boston
 - Industry connections lead to practitioner membership and executive buy-in
 - Need critical mass: cross-IEEE coordination and synergy

Who Am I? A catalyst of change, a technical leader in system software

➤ Distinguished Technologist at Hewlett Packard Labs

- '98-now at HP(E) Labs working on systems software
- '94-'98 at OSF Research Institute, Cambridge MA
- '91-'94 PhD at University of Kaiserslautern, Germany
- '83-'91 Institute "Mihajlo Pupin", Belgrade, Serbia

➤ Working at the birthplace of Silicon Valley

- Regularly presents to CTO of HPE customers
- Exposed to dynamic industry, startups, VCs

➤ Innovator

- 31 patents, 126 patent app, 2 books, >180 papers, 6891 citations, h-i:35, i10:87
- Fellow of IEEE (2010), ACM Distinguished Engineer

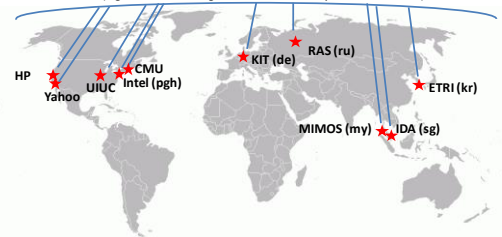
➤ Global reach, extensive management experience

- Managed teams in India, Brazil, Singapore, China, US
- Works with UIUC, Purdue, GaTech, ETH, Technion, etc.
- Managed OpenCirrus Cloud Computing Testbed with 16 sites around the world

➤ Strong support of HPE CTO and Lab VP



Open source Cloud stack (zoni, hadoop, tashi); shared infrastructure (>10*1,000 cores)
Global services (sign on, monitoring, store, sustainability dashboard, etc.)



WHAT HAVE I ACCOMPLISHED IN IEEE?

➤ (Past) Chair of Industry Engagement (2018-19) 2015-17

- Portfolio: Industry Advisory Board, Infrastructure Conference, Confluence of AI & Cybersecurity, Industry Summit, etc.
- Formed IEEE Industry Engagement Committee
- Worked closely with all VPs, Volunteers, Mgmt Council, Staff
- Working towards Industry Congress

➤ Audit Committee Chair, 2018

- Oversaw Global Spec; Harmonized Committee with MOUs

➤ Computer Society President

- Reduced financial deficit by 37%, new revenue sources
- Introduced prestigious “Spirit of Computer Society” Award
- IEEE CS 2022 Report, Tech Trends, Computing Now, Special Technical Communities; started 3 conferences
- on Magazine/Transactions boards, 2 conferences PC chair



SUMMARY

➤ Additional President's Responsibilities

- Align membership and drive organization behind ambitious vision and compelling goals
- A role model: strong technically, skilled organizationally, and driven by business needs
- Inclusive in execution, work exceptionally well with all Volunteers and Staff

➤ As an innovator from industry with strong ties to academia and government, with a global history, I have a proven track record as a catalyst of change

➤ It is time for an IEEE President with a strong technology background, who works for a technology company and understands what technologists want

➤ Please consider supporting my nomination!

Thank you!

Contact me at: dejanm@ieee.org

Please visit:

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