

The Council on Extended Intelligence (CXI) was formed to provide a positive narrative and pragmatic plan for humanity's relationship with machines in the algorithmic age.

Q1 What is the Council on Extended Intelligence?

The Council on Extended Intelligence is an endeavor comprised of multiple global thought leaders partnering to provide a pragmatic vision for the algorithmic age that will move society beyond the 'us versus them' narrative pervasive in media pitting humans against Artificial Intelligence and machines.

By proliferating the ideals of responsible participant design, data agency and metrics of economic prosperity prioritizing people and the planet over profit and productivity, The Council on Extended Intelligence will transform reductionist thinking of the past to prepare for a flourishing future.

Q2 Why are The MIT Media Lab and the IEEE Standards Association (IEEE-SA) partnering to launch CXI?

Both The MIT Media Lab and IEEE-SA are working to prioritize ethically-driven autonomous and intelligent systems in their work and are deeply aligned on the Three Priority Areas (or Pillars) driving the Vision of CXI. By combining their influence and connections to make CXI content rapidly available, The MIT Media Lab and IEEE-SA are working to provide a unique, positive and pragmatic narrative regarding humanity's future with technology.

The three Priority Areas are:

1. [Extended Intelligence](#) > Build a new narrative for intelligent and autonomous technologies inspired by principles of systems dynamics and design.
2. [Digital Identity](#) > Reclaim our digital identity in the algorithmic age.
3. [Enlightened Indicators](#) > Rethink our metrics for success.

For further details, please see full descriptions in our [Vision Statement](#).

Q 3 What is the Council's mission; what does it hope to achieve?

The Council's mission: By proliferating the ideals of responsible participant design, data agency and metrics of economic prosperity prioritizing people and the planet over profit and productivity, we will transform reductionist thinking of the past to prepare for a flourishing future.

Q 4 When will we see the first outputs from CXI?

Our goal is to get up to three of our Pillar Projects completed by the end of 2018. We will be holding webinars with CXI members within a few weeks after launch and will also be producing multiple articles featuring the Pillars and Vision of CXI throughout 2018 and 2019.

Final papers and other outputs will be produced in 2019, with updated time schedules for release being posted on our website as details are finalized.

For further details about the Projects, please see "Our Next Steps" on [CXI's website](#)

Q 5 Who is CXI targeting with its projects?

The general public and policy makers. Our goal with press, articles, and webinars is to show the public at large that reductionist thinking regarding humanity's relationship with machines is both inaccurate and ineffectual in terms of creating a positive future.

While the machines and systems currently comprising "Artificial Intelligence" offer great promise, the narrative surrounding their proliferation ironically pits humans and their abilities against devices created to replicate people's tasks by design.

This line of reasoning devalues human emotion, spirituality and wisdom while ignoring our connections to one another and the environment in ways that reduce people's wellbeing and diminish the full benefit of the machines we're creating to help society.

The public at large needs reassurance that while all humans have bias or make mistakes, we are not inherently broken in need of fixing. Extended Intelligence is about recognizing our connection to others, the environment and how humans play an integral role in the development of technology rather than being inevitably devalued and replaced by it.

Likewise, policy makers need a new narrative to build a positive and pragmatic future. Beyond the systems thinking that Extended Intelligence provides, CXI's Projects focusing on helping people be at the center of their data and for society to move Beyond GDP metrics provide pragmatic ideals to create legislation that will champion holistic societal prosperity for all rather than a select few.

Q 6 How do you envision CXI's projects will positively impact citizens?

Our goal is to educate and enlighten as a tool to change minds and hearts. Where our work also impacts policy, CXI will positively influence how algorithmic technology is prioritized by design.

Many citizens feel overwhelmed at the rapid pace in which Artificial Intelligence has taken hold in our society today. While AI presents many positive opportunities, people often feel these advances are out of their control. Every day headlines discuss the loss of jobs, how AI is replacing humans, and how global organizations control human data in ways people cannot understand.

Humans need a new narrative. Where we are to truly partner with machines, it cannot be via force or manipulation. 'Artificial Intelligence' infers a sense of outside organizations providing potential technological benefits or dangers outside of one's control.

'Extended Intelligence' posits that every human is essential as a core part of a systems-driven relationship.

Q 7 What is the difference between "Extended Intelligence", "Artificial Intelligence" and "Intelligent Systems"?

There are multiple technological differences. But in terms of perception regarding how CXI views these terms:

- > **Extended Intelligence** focuses on how systems integrate and work together in synergistic ways. While one machine may impact one human directly in its immediate use, how that person is transformed via the technology may affect dozens of individuals for years to come.

Systems thinking also involves non-dualistic thinking regarding how technology's benefits should positively benefit all citizens in society versus only those that can afford or immediately understand it.

Finally, systems thinking involves 'participatory' design which prioritizes a holistic, values-driven sensibility to ask and test how technologies will impact all citizens so products and systems are developed that can provably align with and increase wellbeing.

The era of 'move fast and break things' is now 'first ask then make things.'
- > **Artificial Intelligence**, as a media narrative, is complex, messy and largely frightening. This is not the fault of any technology company or individual but the speed at which multiple systems and products are being released and how their value is being projected to the general public.

It's easy to forget that a headline describing AI replacing a certain job as being 'revolutionary and increasing GDP' may delight certain segments of the population (companies tasked with increasing the bottom line) while terrifying others (individuals wondering, 'how will I take care of my family when AI replaces me?')

This narrative is also messy because the term, 'Artificial Intelligence' has been around for decades and encompasses multiple disciplines including robotics, cognitive computing, deep learning, and ASI (artificial super intelligence). This lack of clarity is akin to describing everything from a web browser to an app as, 'The Internet.' The term needs to be evolved.

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- > **Intelligent Systems** is a term describing machines or algorithms designed to ‘learn’ by design. They are ‘intelligent’ in comparison to ‘autonomous systems’ that are designed to carry out a certain set of functions the same way throughout their design (for example, the cruise control in your car).

Q 8 Are MIT Media Lab or IEEE-SA involved in other similar efforts?

Yes. The IEEE Standards Association created [The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems](#) in 2016 to help prioritize ethically-aligned, values-driven design. Extended Intelligence, with its focus on systems thinking and participatory design is new for IEEE-SA and will complement The IEEE Global Initiative’s efforts.

The MIT Media Lab has a range of projects related to artificial and extended intelligence, including:

- work on autonomous vehicles
- the disparate impact of artificial intelligence on employment in smaller, less economically diverse cities
- the effects of biased data sets on facial recognition technology and criminal justice
- the application of AI to industries from entertainment to healthcare

Q 9 How is CXI different from The MIT Quest for Intelligence?

The [MIT Quest for Intelligence](#) is an Institute-wide initiative that encompasses research on human and artificial intelligence across academic disciplines. Its goal is to answer two overarching questions: ‘How does human intelligence work, in engineering terms? And how can we use that deep grasp of human intelligence to build wiser and more useful machines, to the benefit of society?’ While the work the Media Lab is doing in collaboration with CXI will also be relevant to The Quest, and Media Lab associate professor Cynthia Breazeal serves as associate director of strategic initiatives for The Bridge (part of The Quest), CXI is a different organization with different, though compatible, goals.

Q 10 Who else is involved in CXI?

Please see [membership list](#).

Q11 What is the unique value proposition that CXI members bring to the industry?

CXI's initial membership includes multiple global policy makers, economists, business leaders, and technologists. Our goal in bringing together this exclusive group is to amplify the ideals of our Vision for the betterment of society beyond existing reductionist narratives that exist today.

The flourishing future we envision keeps humans as a central part of society working to honor the environment and all the systems that connect people to increase wellbeing. For industry, Extended Intelligence creates a path for long-term sustainability and innovation whereas reductive thinking only focuses on short-term gains.

Q12 Is CXI looking for other members to join?

For now, the initial membership of CXI is complete. Members were chosen by representatives of IEEE-SA and The MIT Media Lab based on people's backgrounds and alignment with the three Pillars comprising CXI's work. CXI will potentially expand its membership in the future but does not have specific plans yet for how or when that will happen.

Q13 What is the timeline to deliver on the Three Projects: Extended Intelligence, Digital Identity and Enlightened Indicators?

Please see above. Some deliverables will launch in 2018, others in 2019. Specifics TBD and announced on our website.

Q14 What are "principles of systems dynamics and design"?

Systems dynamics has to do with how systems interact with one another in real-world usage.

Ofentimes technological value is described in confined ways regarding its direct usage by one individual. For instance, a mobile phone may offer multiple benefits to an individual to help plan their work, access the Internet, and stay connected with distant friends. However, the fact that it has also diminished how people interact with each other was not fully recognized in its design.

Likewise, while many organizations are working to comply with environmental laws, not enough is being done to proactively prioritize ecological flourishing beyond simply sustaining basic resources. Humans need a healthy planet not only to survive but to benefit from the increased wellbeing that green space and thriving ecosystems can bring.