

Consortium for Research Practices

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Introductory Meeting
Minneapolis, January 10, 2013

did you know?

did you know?

The AIA'S GOAL is to reach
net zero carbon emissions by **2030**

2010 – 60%

2015 – 70%

2020 – 80%

2025 – 90%

– net zero

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– net zero

...the means to achieve this are not currently understood.

We have 17 years to discover,
and implement, what it takes to reach this goal.

did you know?

did you know?

The globe has warmed $1.2^{\circ}F$ from pre-industrial levels.

“we will be producing a different planet.”

-NASA scientist James Hansen, forefront leader of American climate researchers

did you know?

The globe has warmed $1.2^{\circ}F$ from pre-industrial levels.

2012 was the warmest year and 2nd most extreme on record in the US.

NASA scientists predict further warming of 3.6 to $7.2^{\circ}F$,
creating an entirely new planet .

“I think we have a very brief window of opportunity to deal with climate change... no longer than a decade, at the most”

-NASA scientist James Hansen

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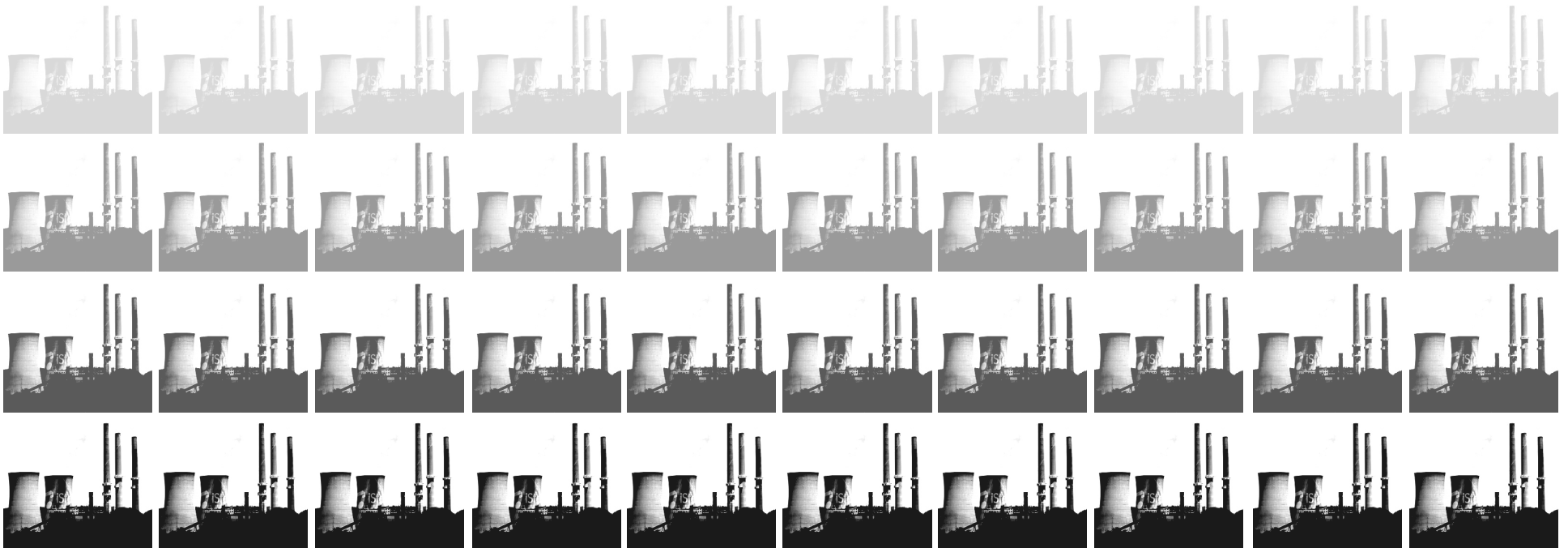
To avoid this, we have *less than 5 years* to enact change.

did you know?

did you know?

Energy consumption is measured in “Quads” (Quadrillion Btus)

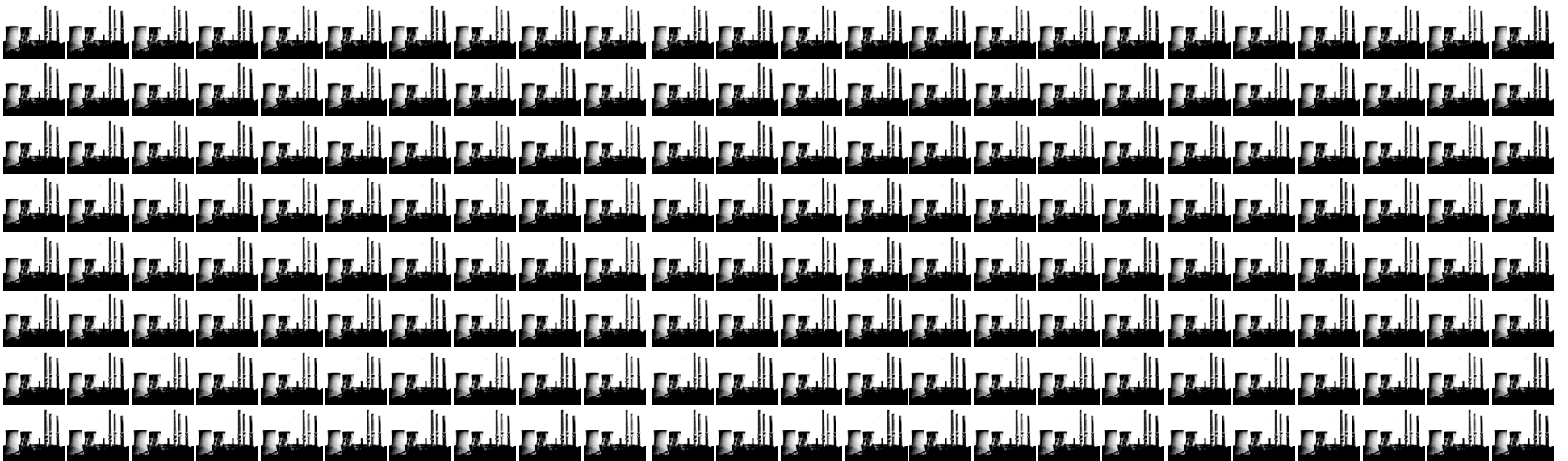
One Quad = 40 large nuclear power plants



did you know?

The world uses approximately *400 Quads* of energy annually.

400 Quads = 16,000 large nuclear power plants

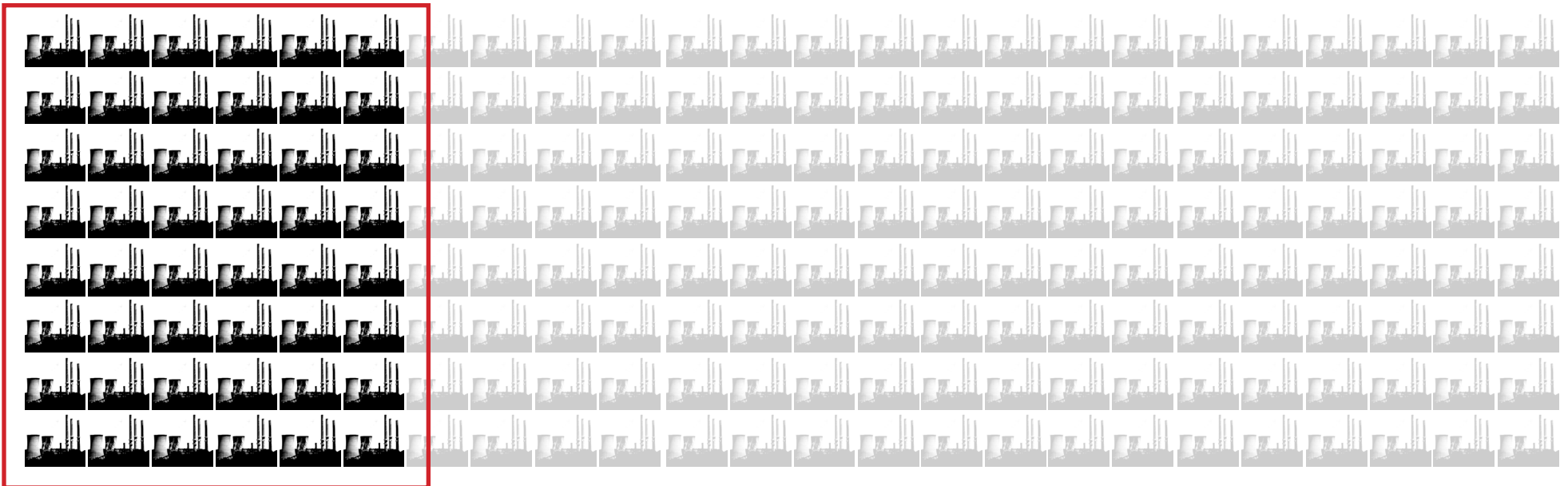


25% of the world's total energy expenditure comes from one country

did you know?

The world uses approximately 400 *Quads* of energy annually.

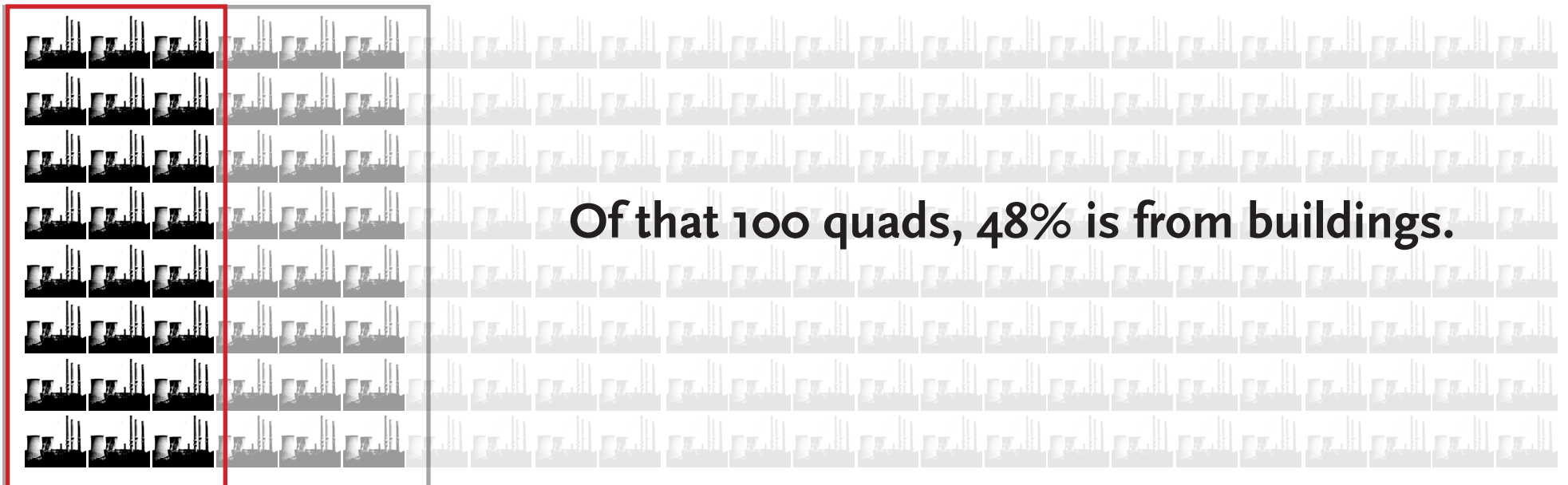
The United States alone uses approximately 100 *Quads* of energy annually.



did you know?

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did you know?

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The United States construction industry
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\$15.8 billion annually is lost due to lack of interoperability.



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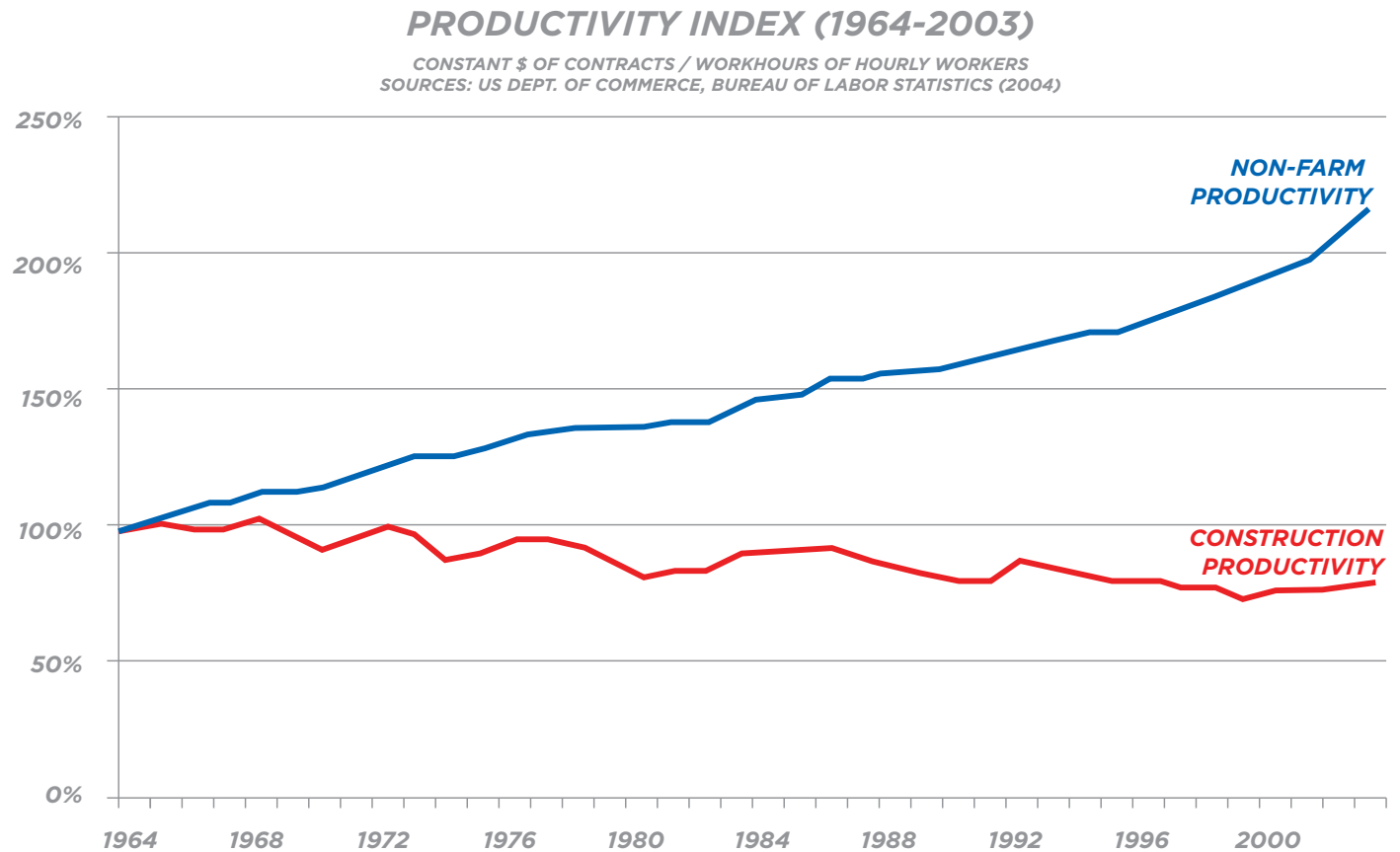
The construction industry
lost productivity between 1964 and 2004

did you know?

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did you know?

...while all
other non-farm
industries
more than
doubled



did you know?

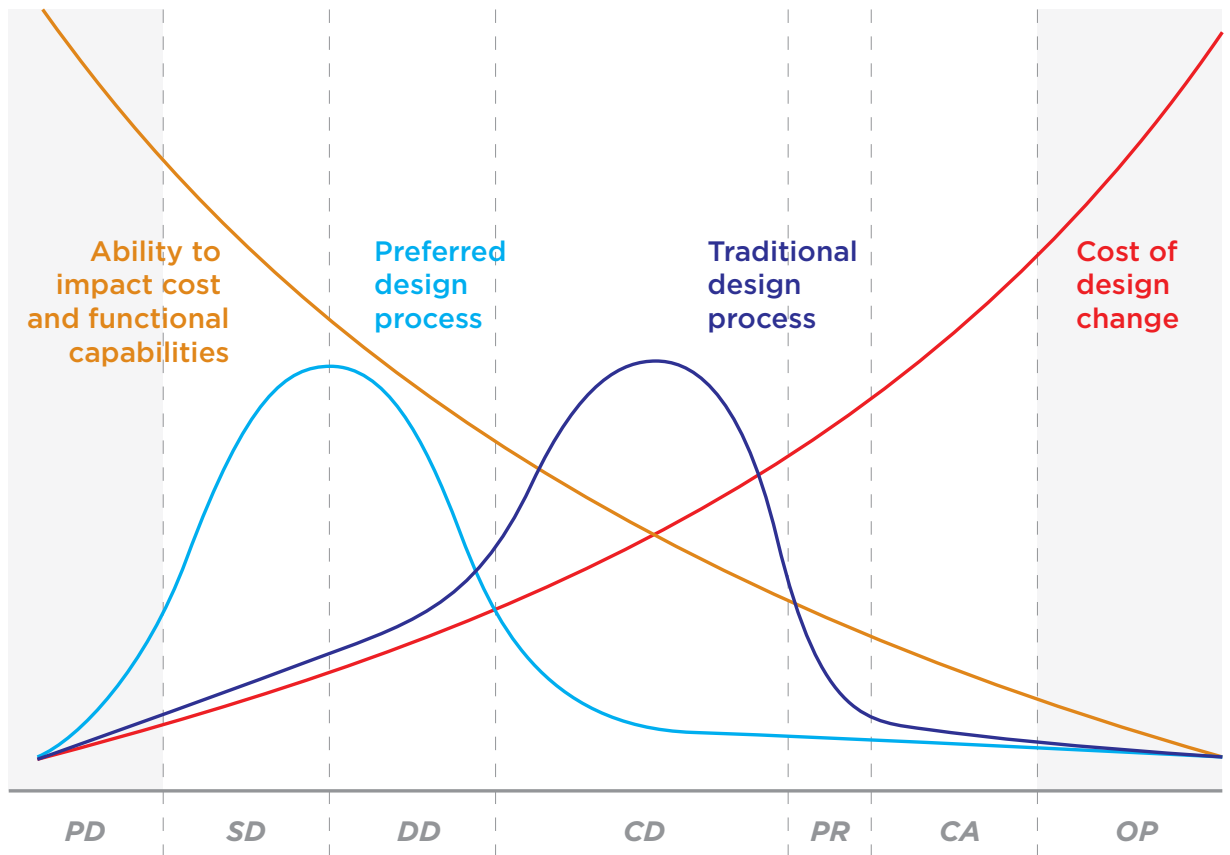
If you draw a curve showing where
the majority of design activities occur...

did you know?

If you draw a curve showing where
the majority of design activities occur...

did you know?

...they are *too late to optimize cost savings*



Source: Patrick MacLeamy, HOK, 2004

did you know?

did you know?

the design and construction cost of a building...

did you know?

the design and construction cost of a building...

....account for only 25% of its total life cycle cost

*reducing the remaining 75% could yield the largest untapped savings
in the AEC industry*

did you know?

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most disaster-related, fracture-critical failures
could have been avoided with better design?

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... and the cost of Super Storm Sandy *exceeds \$42 billion*

did you know?

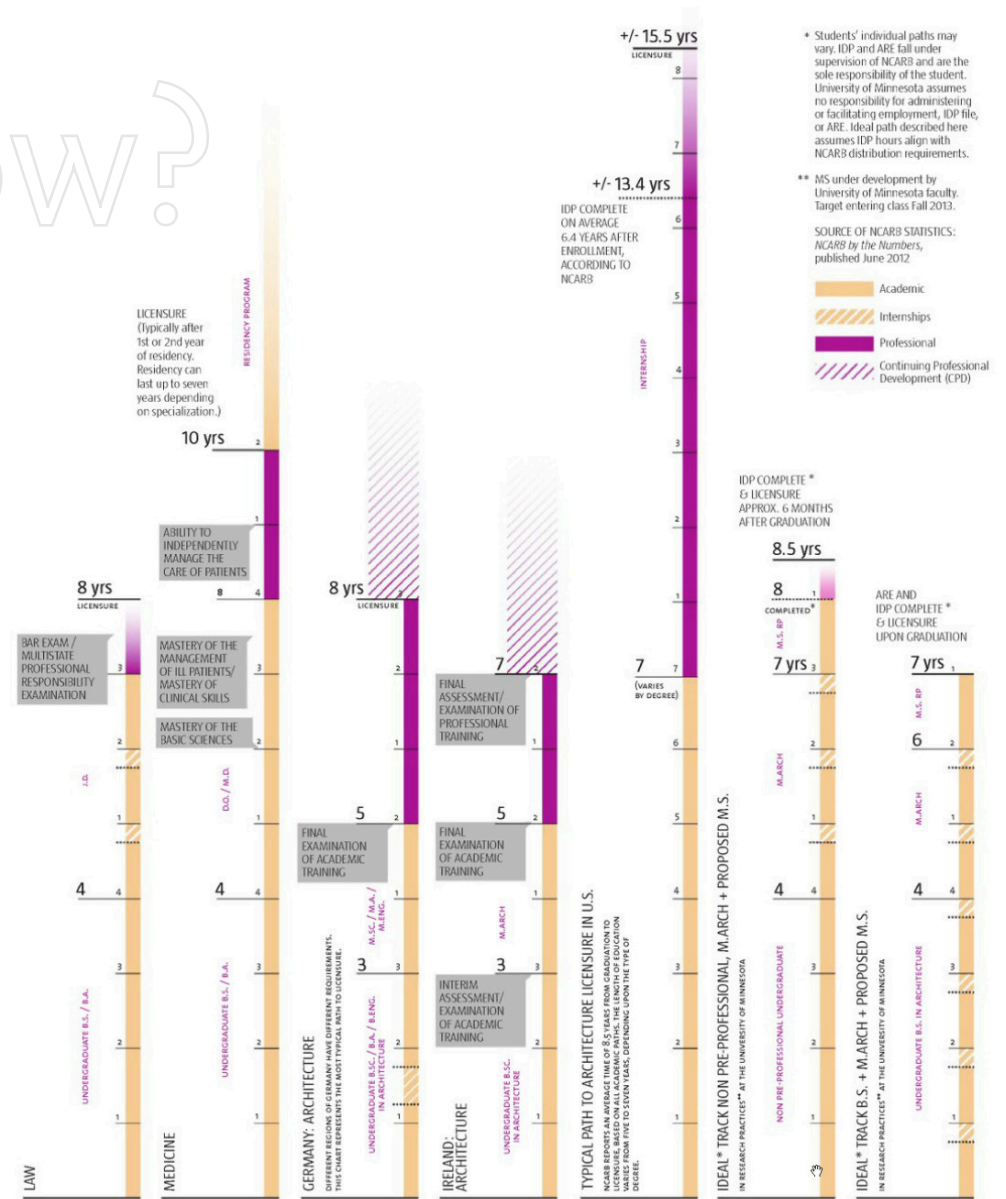
it takes an average of 8.5 years after graduation
to become a licensed architect?

did you know?

it takes an average of 8.5 years after graduation to become a licensed architect?

did you know?

which means, in real time, its a 14.5 year path... which is longer than law or medicine



Sources: "Seven is Enough", Architect Magazine, Jan 2013
NCARB by the Numbers, June 2012

do you think...

the value proposition in the AEC industry needs to change?

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*the value proposition in the AEC industry needs to change?
architects need to show the value of design?*

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architects need to show the value of design?
architectural education is at a cross road?*

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the value proposition in the AEC industry needs to change?

architects need to show the value of design?

architectural education is at a cross road?

the next generation of architect leaders can thrive?

students, ask yourselves...

*Is my education equipping
me to play a role in the future
of the built environment?*

students, ask yourselves...

*Is my education equipping
me to play a role in the future
of the built environment?*

*Do I have the willingness
to take on large, messy,
complex problems?*

faculty, ask yourselves...

faculty, ask yourselves...

*Am I instilling the passion for
lateral, creative thinking—
in other words, design?*

faculty, ask yourselves...

Am I instilling the passion for lateral, creative thinking— in other words, design?

Am I inspiring my students to ask questions that I could never imagine?

AEC firms, ask yourselves...

Is my firm going to be part of the solution?

AEC firms, ask yourselves...

Is my firm going to be part of the solution?

*Do we have the willingness
to be a collaborative partner in this consortium?*

What if...

...there was a way for recent graduates to have a focused, structured path to licensure?

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What if...

- ...there was a way for recent graduates to have a focused, structured path to licensure which for some qualified students may lead to licensure upon graduation?*
- ...and that path included substantive leadership in areas of research linking faculty expertise with firm needs?*
- ...and a consortium of firms collaborated with a school to create...*

Consortium for Research Practices

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and
Master of Science in Architecture,
Research Practices

Consortium for Research Practices
and
Master of Science in Architecture,
Research Practices
at the School of Architecture
University of Minnesota

<http://rp.design.umn.edu>