The Big Picture:

Macro trends in the Economy, Planning, and Zoning

Rocky Mountain Land Use Institute

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Colliers International

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What’s Up With the Economy?
Uncharted Waters:
Trump Sets New Economic Course for the Aging Expansion
*Implications for Western States and Commercial Real Estate*

Andrew J. Nelson
Chief Economist | USA

RMLUI Western Places/Western Spaces. Denver, CO
March 16, 2017
The Uneven, Moderate Expansion Continues Deserves more respect
The Uneven, Moderate Economic Recovery Continues
Not perfect but good enough (at least for property markets)

- Strong enough to drive tenant demand and property investment and yet . . .
- Not strong enough to overheat (most) markets or encourage excessive supply

THE GOOD
- Home prices and sales back to prior peak; home starts strong
- Essentially at full employment and still going strong
- Consumers happier, stronger, confident . . . and spending
- Credit markets still benign

THE UNKNOWN

THE BAD
- Skewed recovery; weak wage growth; growing wealth inequality
- Slow global growth and trade; shaky European banks
- Weak mfg / exports; strong dollar; low CAPEX
- Decaying, inadequate infrastructure

Source: Colliers International
The Uneven, Moderate Expansion Continues (1)
Still no breakout, but private domestic economy better

Quarterly GDP Growth at Annualized Rate

Quarterly Annualized Growth of Final Private Sales*

Note: * Final Sales to Private Domestic Purchasers = GDP less Net Exports, Net Inventory Adjustments, and Government Spending and Investment.
Sources: BEA, Macroeconomic Advisors via Haver Analytics and Colliers International.
Leading Indicators Still Positive, But Trending Down
Most states to keep expanding – including Colorado and the West

Economic Overview: Some concerns
Economic Concerns (1): Smaller, Less Productive Workforce
Fewer workers carrying the load

**Labor Force Participation Rate* (1985+)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
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<tbody>
<tr>
<td>1985</td>
<td>60%</td>
</tr>
<tr>
<td>1990</td>
<td>61%</td>
</tr>
<tr>
<td>1995</td>
<td>62%</td>
</tr>
<tr>
<td>2000</td>
<td>63%</td>
</tr>
<tr>
<td>2005</td>
<td>64%</td>
</tr>
<tr>
<td>2010</td>
<td>65%</td>
</tr>
<tr>
<td>2015</td>
<td>66%</td>
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</tbody>
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**Quarterly Productivity Growth (1965+)***

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth</th>
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<tbody>
<tr>
<td>1965</td>
<td>-0.5%</td>
</tr>
<tr>
<td>1970</td>
<td>0.0%</td>
</tr>
<tr>
<td>1975</td>
<td>0.5%</td>
</tr>
<tr>
<td>1980</td>
<td>1.0%</td>
</tr>
<tr>
<td>1985</td>
<td>1.5%</td>
</tr>
<tr>
<td>1990</td>
<td>2.0%</td>
</tr>
<tr>
<td>1995</td>
<td>2.5%</td>
</tr>
<tr>
<td>2000</td>
<td>3.0%</td>
</tr>
<tr>
<td>2005</td>
<td>3.5%</td>
</tr>
<tr>
<td>2010</td>
<td>4.0%</td>
</tr>
<tr>
<td>2015</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

* Three-year moving average.
Economic Concerns (3): Job Polarization and Flat Incomes

Inter-generational income gains end as well-paid blue collar jobs fade

Share of Jobs by Type* (1984-2015)

- Knowledge Workers
- Routine Office
- Routine Manual
- Non-Routine Service

Share of 30-Year-Olds Earning More than Their Parents

* 3-month moving average.
Property / Capital Markets
Markets Mostly Recovered or Getting There
MF and industrial vacancies below avg.; office and retail still elevated

Sources: REIS and Colliers International

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= Average Vacancy 1990-2007

Sources: REIS and Colliers International
Markets Mostly Recovered or Getting There
MF and industrial vacancies below avg.; office and retail still elevated

Sources: REIS and Colliers International
Real Estate Concerns: Property is Pricey
Values surge in office and multifamily; lag in industrial and retail

Sources: Real Capital Analytics and Colliers International
Denver and Western States in Context
Jobs: Denver and the West vs. U.S.
Denver far outpaces the rest; western states mostly on par with nation

Output and Employment: West vs. U.S.
West slower to recover but consistent outperformance since

Sources: Moody’s economy.com and Colliers International
Summary and 2017+ U.S. Forecast

“Mostly sunny with increasing clouds and a chance of showers”
Enter President Trump
Upside near-term potential with elevated downside risks

Positives
• infrastructure spending
• tax cuts / reform
• regulatory relief reform

Negatives and Risks
• deficit spending (?)
• protectionist policies
• isolationist initiatives

› Trump’s 2017 stimulus package could provide modest economic lift
  • Too many unknowns for definitive projections.
  • Don’t expect implementation / impacts until late 2017 or later.
  • Rising inflation, stronger dollar, and higher interest rates will blunt gains.

› Trump’s broader economic platform has upsides . . . and major risks
  • Business-friendly tax and regulatory reforms could fuel stronger GDP and job growth.
  • Protectionist and isolationist initiatives could slow long-term growth and derail expansion.
2017-18 U.S. Economic Forecast

“Mostly sunny with increasing clouds and a chance of showers”

- We’re (much) closer to the end of the expansion than the beginning
  - The economy had been cooling but year ending on a strong note.
  - One to two good years left, but Trump could extend cycle – and raise risks.

### Forecasts for Key Economic Indicators

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>2015</th>
<th>2016</th>
<th>1Q17</th>
<th>Mean</th>
<th>Range**</th>
<th>2017 Change</th>
<th>2018</th>
<th>Range**</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP*</td>
<td>2.6%</td>
<td>1.6%</td>
<td>2.2%</td>
<td>2.3%</td>
<td>2.1%-2.5%</td>
<td>+0.1%</td>
<td>2.4%</td>
<td>2.1%-2.7%</td>
</tr>
<tr>
<td>Consumption*</td>
<td>3.2%</td>
<td>2.7%</td>
<td>3.1%</td>
<td>2.7%</td>
<td>2.5%-2.9%</td>
<td>+0.3%</td>
<td>2.6%</td>
<td>2.3%-2.9%</td>
</tr>
<tr>
<td>Business Investment*</td>
<td>2.1%</td>
<td>-0.4%</td>
<td>2.2%</td>
<td>3.1%</td>
<td>2.6%-3.6%</td>
<td>+0.1%</td>
<td>3.9%</td>
<td>3.1%-4.7%</td>
</tr>
<tr>
<td>Net Exports (Billions)</td>
<td>($540)</td>
<td>($562)</td>
<td>($599)</td>
<td>($624)</td>
<td>($598)-($650)</td>
<td>+$25</td>
<td>($696)</td>
<td>($634)-($758)</td>
</tr>
<tr>
<td>Industrial Output*</td>
<td>0.3%</td>
<td>-1.0%</td>
<td>0.5%</td>
<td>1.4%</td>
<td>1.0%-1.8%</td>
<td>+0.2%</td>
<td>2.3%</td>
<td>1.7%-2.9%</td>
</tr>
<tr>
<td>CPI</td>
<td>0.1%</td>
<td>1.3%</td>
<td>2.5%</td>
<td>2.5%</td>
<td>2.3%-2.7%</td>
<td>+0.2%</td>
<td>2.3%</td>
<td>2.0%-2.6%</td>
</tr>
<tr>
<td>Wages</td>
<td>2.1%</td>
<td>2.2%</td>
<td>N/A</td>
<td>2.5%</td>
<td>2.2%-2.8%</td>
<td>(0.2%)</td>
<td>3.0%</td>
<td>2.6%-3.4%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>5.3%</td>
<td>4.9%</td>
<td>4.7%</td>
<td>4.6%</td>
<td>4.5%-4.7%</td>
<td>(0.1%)</td>
<td>4.5%</td>
<td>4.3%-4.7%</td>
</tr>
<tr>
<td>Y/E 10-Year Treasury</td>
<td>2.2%</td>
<td>2.5%</td>
<td>2.5%</td>
<td>2.9%</td>
<td>2.8%-3.0%</td>
<td>+0.6%</td>
<td>3.3%</td>
<td>3.0%-3.6%</td>
</tr>
</tbody>
</table>

* Average percent change on previous calendar year

** mean consensus average ± standard deviation

Source: Consensus Forecasts, February 2017 and Colliers International
What’s Next for Property Markets
“Continued improvement in fundamentals but growing risks”

› **We’re (much) closer to the top of the property market cycle than the bottom**
  • Absorption to continue slowing.
  • Financial returns will continue easing as cap rates stabilize / rise . . .
  • But strong investor interest will maintain asset values for now.

› **Impact of Trump’s economic agenda on property sector will depend on specifics**
  • **All property sectors would gain** from stimulus, lower taxes, regulatory relief.
  • **Office** leasing would benefit from expected regulatory rollback, esp. financial sector.
  • **Industrial** gains from military and infrastructure spending, loses on any reduction in trade.
  • **Retail** would benefit from HH tax cuts but lose from reduced population and costly imports.
  • **Multifamily** could gain from higher interest rates that raise cost of home buying.

› **Investors should prepare for inflation, higher interest rates, and end-of-cycle impacts**
  • **Higher inflation** will favor multi-tenant buildings with shorter lease terms.
  • Risk of **recession** will favor top-credit tenants under long-term leases.
  • Domestic and off-shore **investor demand for U.S. property remains** strong . . . but
  • **Higher interest rates** and potential **trade wars** could curb investor appetite for real estate.
How is the Practice of Planning Evolving?
Emerging Trends...the next 5, 20 and 50 years?
2065?

10.4 billion global population

67% urban =

7.0 billion global urban population

or

3.7 billion more people in cities =

456 New York Cities (7.6/yr)

or

1,496 Denver Metro Areas (25/yr)

Source: AECOM
Access to Water – Too Much, Too Little, or Too Dirty
Smart Cities and Technology
Projected Proportion of U.S. Population by Age, 65 Years or Older

Source: U.S. Census Bureau, The Next Four Decades: The Older Population in the United States, 2010 to 2050
The Planning and Community Health Research Center advances plans and policies for improving the built environment to promote public health.

Planning and Community Health Research Center
Changing Face, Changing Place

2015
Millennials – 92m
Gen X – 61m
BB – 77m
“The problem is we’ve got to plan for people who haven’t been born yet, with the support of people who will be dead.”
The Next Five Years –
US Pop 335m / World Pop 7.8b

- Planning as a partisan issue?
- Where will millennials live when they have families?
- Will technology enable or disrupt meaningful civil discourse?
- Education & income inequality between regions
- Education & income inequality within regions
- The politics of what to do?
- Off-shoring production & pollution - public health issue
- Divisiveness - the impacts of exclusion
- China, India and regulating air-quality soon, before it's too late – & the US?
- Where will millennials live when they have families?
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The Next Five Years –
US Pop 335m / World Pop 7.8b

- Effective response in the immediacy of a crisis or natural disaster (refugee/immigration, superstorms)
- Immigration and refugees – from war, strife, poverty, lack of water
- Highway capping in cities (125 projects underway now), infrastructure repair + placemaking
- Water, water, water
- Technology, civility, and meaningful public discourse, or not
- Municipal finance crisis - pensions vs. services - less room for planning
- Sharing economy and the built environment
- Rebuilding from disasters

Impacts of global security on cities

planning.org
"The infusion of place-making into infrastructure is a gigantic ball of transformation that's rolling, at different speeds in different places."
“Transportation is becoming a service, not a product.”
Plan for Market Choices

Mobility

Housing

Community
The Next 20 Years
US Pop 370m / World Pop 8.8b

- Shift from ownership to usership in transportation
- Is the public transit industry nimble enough to adapt?
- Cities will be where the wealth is concentrated
- Global migration of population
- Impacts from changing technology on the workplace
- Technology - thinning the middle strata of the labor force
- Bifurcation of housing market
- Drones & 3D Planning
The Next 20 Years
US Pop 370m / World Pop 8.8b

- Demand for multiple benefits from public investment
- Autonomous vehicles and their effect on spatial planning
- The regeneration of the GI Bill Communities
- Big Data feedback on energy consumption
- Climate change and geopolitical shifts
- More eco communities
- 90% of growth in the Global South - major migration to cities

The Next 20 Years
US Pop 370m / World Pop 8.8b
“If we’re constantly competing for a limited amount of resources, and it’s a global competition, then we’re going to be doing more with less.”
The Next 20 Years
US Pop 370m / World Pop 8.8b

Globally, some cities will grow rapidly;
Wealth will move toward risk (shore/beaches, and open space)
Successes’ externalities
In cities, more mobility choices; purchasing power specialized
Worsening inequality
Mass Transit redefined - working with sharing mobility & technology

While other cities will slowly empty out - Russia, Korea, Japan
The Next 20 Years

US Pop 370m / World Pop 8.8b

- Monopolies, oligopolies won't survive the sharing economy...
- Food Security and the geopolitics of water
- The impacts of rising sea levels will become real
- Evolution from the Ownership Society to the Renter and Sharing society
- E-commerce's impact on commercial development
- Technology and smart pricing
- ...maybe even local government and transit

planning.org
“The planning profession grew up in a long era of growth. We are not built for decline; for some cities, will it stop?”
As a shrinking city, Cleveland had to re-imagine itself as a city based on a new form of sustainability.
“Will Millennials in their 60s be like me?”
The Next 50 Years
US Pop 441m / World Pop 10.4b

Will technology make cities unnecessary?

Genomics influencing community choices & design

Impact on open space, human health, and psychology

The redesigned street & streetscape

On-call, hydrogen autonomous vehicles

planning.org
The Next 50 Years
US Pop 441m / World Pop 10.4b

- Re-emerged Detroit, Toledo, and Cleveland
- Ghost beach towns
- More and more poly-centric cities
- Mosaic cities rather than integrated, pluralistic cities
- Shrinking cities in Asia
- Big infrastructure - Maglev, flood gates, water storage, aerotropolis
- Africa - the Asia of the future
- Equatorial regions hotter, northern regions more temperate - people will move back
The Next 50 Years
US Pop 441m / World Pop 10.4b

- Wealth and power distributed more broadly - China and India
- Cooperative housing and support for aging population
- More individualized society & space
- Land bridges to move autonomous trucks - like bike bridges
- 4D printing of custom manufactured housing
- The 21st Century is about differentiation - will housing and communities reflect that?
- Digital Age of consumption may replace the Material Age of consumption

The Digital Age of consumption may replace the Material Age of consumption.
The Next 100 Years

The First Planned Community & Zoning Code on Mars

Source: www.universetoday.com
And What About Zoning?
And What About Zoning?

Three Unfortunate Truths

1. It’s DNA is Exclusionary

2. It Tends to Get More Rigid Over Time
And What About Zoning?

Three Unfortunate Truths

3. It Tends to Get More Complicated Over Time
And What About Zoning?

These Truths Affect Use-Based Codes

<table>
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<tr>
<th>Land Use</th>
<th>MS-1</th>
<th>MS-2</th>
<th>MS-3</th>
<th>DT-1</th>
<th>DT-2</th>
<th>DT-3</th>
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<td>Dwelling, Single-Family</td>
<td>C</td>
<td>P</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<tr>
<td>Dwelling, Multi-Family</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
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<td>Cultural Uses</td>
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<td>Eating Places</td>
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<td>P</td>
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<td>Recreation / Entertainment</td>
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<td>P</td>
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<td>P</td>
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<td>Retail and Services</td>
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<td>P</td>
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And What About Zoning?

And

Form-based Codes
And What About Zoning?

Housing Affordability Challenges are Structural
And What About Zoning?

Suburbanization of Poverty (the Not-so-Great Flip)
And What About Zoning?

More People Self-Employed
And What About Zoning?
More People Working From Home

Percent of employed persons who worked at home on an average workday

<table>
<thead>
<tr>
<th>Job Holding Status</th>
<th>Class of Worker</th>
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</thead>
<tbody>
<tr>
<td>Single Jobholders</td>
<td>Self-employed</td>
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<tr>
<td>Multiple Jobholders</td>
<td>Workers</td>
</tr>
<tr>
<td>Wage and Salary Workers</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>39%</td>
</tr>
</tbody>
</table>
And What About Zoning?

A Huge and Growing Informal Sector
And What About Zoning?

1. The age-old tension between Predictability and Flexibility will continue.

- Residential neighborhoods will continue to demand predictability
- Mixed-use and other areas will continue to need more flexibility
- And the rapid pace of economic change will push us to innovate in new forms of “predictable flexibility” – flexibility within clear boundaries.
And What About Zoning?

2. Flexibility will need to be achieved with much greater efficiency.
   
   – We will stop using PUDs that need to be endlessly amended because they are too strict (or too flexible).
   
   – Sunsetting PUDs that convert into more predictable base zoning?
   
   – More staff authority to approve projects that do not meet standards – within a defined range of changes?
And What About Zoning?

3. Hybrid codes with both use and building form controls will be the norm.
   – Because even form-based codes really do contain significant use regulations
   – And most use-based codes already contain much more detailed building form controls than they used to
   – And citizens care about both of them
   – It’s just a matter of finding the right balance for different parts of the community.
And What About Zoning?

4. We’ll get much more flexible about housing.
   – Allowing smaller housing units (micro-units, cottages, co-housing)
   – Allowing multi-household occupancy of big suburban houses that were originally built for one household
     • For lower income
     • For multiple generations
   – Loosening up on home occupations – because a growing part of the population needs to work from home
And What About Zoning?

5. We’ll allow mixed uses more often – and get smarter about it.

- Because it allows shorter commutes and reduces emissions
- Because more people will need to work from home with more impacts than a home occupation
- Because it evens out peak traffic burdens
- Specific controls will probably become more performance based (i.e. noise, deliveries, hours of operation)
And What About Zoning?

6. We’ll adjust parking and design standards to reflect autonomous vehicles and drone deliveries.

– They’re coming – much faster than you think
– Some impacts depend on whether autonomous vehicles are privately owned or managed as services
  • If privately owned – promotes sprawl
  • If operated as a service, might not promote sprawl
  • Maybe less parking, more staging
And What About Zoning?

7. We’ll allow a wide variety of services and facilities for the elderly – close to where they live.

- Food delivery services
- Physical therapy / nursing services
- Drug delivery services
- Home repair services
- Many of which could be delivered by autonomous cars or drones, but they will still need fulfillment / staging areas
And What About Zoning?

8. We’ll create or accommodate many new types of “third places”.
   – Housing affordability pressure means smaller units,
   – Which means less time at home, (and some of that time will be work time)
   – Which means we’ll need more types of places to get out of the home for other social / physical activities.
   – It also means more self-storage units – so you better make them good
And What About Zoning?

9. We’ll lighten up on non-conformities

- Theory was based on the need to “fit in”—but all the trends are allowing or encouraging more things to fit into each type of neighborhood
- It’s already there – leave it alone
- And reuse of existing buildings is more “sustainable” in terms of embedded energy and labor
- Only put pressure on the dangerous ones
And What About Zoning?

10. Zoning will become more automated, prescriptive, inclusive, and “European”.

- Global pressures to be efficient and adjust quickly will require more standards and less negotiation
- After a century of being mostly exclusionary zoning will become more inclusionary -- mostly for economic rather reasons
- We have models for how rational people react to resource constraints and global economic pressures – they’re in Northern Europe
Questions and Discussion


www.aecom.com/Andrew-nelson

www.clarionassociates.com