**Rate Sessions**

### Excursions, etc.

- **The Future of Work**
  - **September 26, 2019**
  - **00:30 PM - 05:00 PM**
  - **Session Code: A01**

**In order to position your organization to attract top talent, drive breakthroughs, and serve customers better, employees need to understand and prepare for the evolution of the workforce. The sooner organizations adopt the future-focused mindset, skills, and strategies needed to thrive in an increasingly virtual and flexible work environment, the sooner they will realize economic benefits. In this presentation, leaders will learn how to position their organization to be innovative and responsive for attracting and retaining workforce talent. In this session, you will:**

- Learn how to capitalize on and manage changing employer-employee relationships and workplace attitudes
- Adapt your workplace to a commitment-based work model and enforce a culture of learning
- Keep a blended, multi-generational, diverse, and global workplace engaged

### Rate Speakers

**Maggie Coleman**

**Summary**

Maggie Coleman is a Managing Director and Head of International Capital, Americas. In this role, Ms. Coleman leads a team that is primarily focused on cross-border capital deployment from global investors across Canada, EMEA and Asia Pacific. Ms. Coleman is responsible for placing capital from international investors into JLL’s direct transactions, structuring recapitalizations and joint ventures, while also helping offshore capital acquire and finance JLL’s global investment portfolio and large-scale asset sales. Ms. Coleman maintains relationships with senior decision makers at a wide range of offshore capital sources ranging from institutional to private capital groups.

Ms. Coleman has been involved in over $20 billion in transactions and has directed the JLL platform that has executed over $3 billion in transactions since 2011, including over $10 billion in loan sales in the US, Europe and Asia. Further, Ms. Coleman is responsible for business development, client management and the execution of global transactions. She is a frequent speaker on global capital flows in the real estate sector.
Vanessa Anderson
Truss

Stephen Smith
WPA

Jennifer Conway Viriato
Kamehameha Schools
AI is everywhere
...and will be everything
Let’s start with the basics…

… what is artificial intelligence and machine learning?

Why does it matter to me?
ARTIFICIAL INTELLIGENCE = systems that perform tasks that would normally require human intelligence
MACHINE LEARNING

= a type of artificial intelligence where systems learn from the past to predict the future

“an ML algorithm learns patterns in a high-dimensional space without being specifically directed”
A Complicated Illustration

Many of the various types of machine learning out there and their uses
A Simple Illustration
Research:
Real estate meets machine learning: just hype?

Research questions:
- How is AI/ML being applied in real estate technology today?
- What are the actionable opportunities for applications of AI/ML in real estate?
Research:
Real estate meets machine learning: just hype?

Methodology:
• Interviews with over 40 professionals and real estate technology firms
• Literature review
• Established categories of technology firms and ML/AI product area
How It Is Being Applied

DATA Data gathering and distribution can be accomplished with new MI tools, which have the power to capture every interaction with a new software, every sensor output, and every message sent, making these and other day-to-day elements of the real estate business into rich sources of data.

ANALYTICS Analytics using machine learning has great potential to enhance our understanding of the built world and investment. As datasets grow, it is important to track which companies begin to develop truly sophisticated data analysis methods to leverage that data.

VALUATION Real estate valuation is key to the business in areas such as sales, portfolio management, REIT valuations, tax assessment, and lending. Automated valuation models using MI tools improve predictive abilities, and also streamline appraisal and assessment processes.

RISK Risk assessment using machine learning can produce a better understanding of thousands of potential risk factors. Lenders can optimize borrowing levels and rates and insurance companies can balance customer demand and potential costs.

BUSINESS PROCESSES Business processes can be enhanced through new software with structured, purpose tailored environments. These environments become data sources in themselves, recording and learning from every customer interaction.

NLP / NLG Natural language processing (NLP) and Natural language generation (NLG) give computers to ability to read text and communicate back to us in “human” terms. These tools are used in chatbots, contract review and data extraction, data gathering, and document writing.

COMPUTER VISION A picture is worth a thousand words, especially with powerful tools using computer vision, which allows computers to interpret images and video. It can be used for value assessments, people tracking, and reading documents.

3D ANALYSIS AI and MI technologies are enabling a wide range of new approaches to mapping, designing, and constructing the built world. With machine learning technology, 3D analysis for image augmentation and space planning can be performed quickly and efficiently.

GEOSPATIAL ANALYSIS Geospatial analysis is the use of geographic coordinates in data display and analysis. The importance of location is not lost on the machine learning scientists who have developed interesting locational analysis tools.

IOT The massive datasets coming from Internet of things (IoT) technology, where physical objects in our environment are internet connected, will enable us to see patterns in human behavior, including interactions with the physical environment.
Key Take-Aways

• We are in the early stages of the development of machine learning and artificial intelligence for real estate
• The first step for most real estate firms and technology partners is collecting, gathering, and organizing data
• Machine learning can be a useful tool in gathering or merging data from disparate sources
• Early adopters are contending with the difficulty of sorting through who is “real” and what value tech firms can add to business processes
Key Take-Aways

• There is a shortage of data scientists and machine learning experts, making hiring difficult for real estate tech firms
• There are a lot of pitfalls that can occur when applying machine learning algorithms to data of any kind without proper understanding of the meaning and implications of the various variables involved
• There is some powerful non-AI/ML real estate technology software available
Some considerations:

• Behavior-based  
  (Sometimes actions speak louder than words)

• Crowd-sourced  
  (Of the people, for the people)

• Needs, not wants  
  (Faster horse anyone?)

• Psychologically safe  
  (Avoid the junk in, junk out data)

• Predictive  
  (Where will we be tomorrow?)
Behavioral Space Planning

What they’re doing

The value it provides

Where it gets done

How hard is it?
How collaborative is it?
How much time does it take?
Behavioral Space Planning

Who they rely on
- Information flow
- Adjacency needs
- Organizational design

What matters most
- [Bar charts with various metrics]

What they value
- [3D radar chart showing different values across dimensions]
Behavioral Space Planning

- Minimal surface
  - Health & Safety regulated monitor workplace (94.66)
  - Seats for informal collaboration (17.15)
  - Cocktails for calling & concentration (6.52)
  - Brainstorm seats (9.64)

- Workplace type mix
  - Cocktails for calling & concentration
  - Health & Safety regulated monitor workplace
  - Seats for informal collaboration
  - Seats for formal collaboration, not counting visitor seats
  - Brainstorm seats

Graph showing the distribution of different workplace types.
How does Truss work?

TRUSS TECHNOLOGY SAVES YOU TIME & MONEY
Vera delivers exceptionally relevant search results
Eliminate unnecessary tours by previewing the space virtually
Request for proposal for The Rookery, Suite 980, 9th floor

WAITING FOR PROPOSAL
You sent this RFP to the landlord 34 minutes ago. We’ll let you know as soon as we have a response.

Questions? Discuss with the broker using the chat.
Would you like to send this to someone not on Truss for review? Just use the link below to email it.

Email this proposal

INTRODUCTION
Introduction: Tracked Tech is soliciting lease proposals from a short list of buildings through Bob’s Brokerage

DISCUSS WITH YOUR BROKER:

SMS Company
I am looking for a space that’s 1,600 – 2,800 square feet for 2 years.
37 minutes ago

Bob Billings
shared a draft
35 minutes ago

You submitted a request for proposal.
34 minutes ago

Bob Billings
We can work on the rate if you’re willing to stay longer. Let me talk to the landlord’s broker.
29 minutes ago

Bob Billings
Great news! They can lower the monthly rent by $150/month.
A few seconds ago

SEND →
Easily track, store, and manage leases
BENEFITS FOR THE BROKERS
### Impact to Tenant Reps

<table>
<thead>
<tr>
<th>Activity</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Search Space</td>
<td>15-30 min</td>
</tr>
<tr>
<td></td>
<td>To create an interactive market survey</td>
</tr>
<tr>
<td>Tour Space</td>
<td>4.9 tours</td>
</tr>
<tr>
<td></td>
<td>Compared to 15-20 without the platform</td>
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<tr>
<td>Lease Negotiations</td>
<td>72%</td>
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<td>Clients that request a proposal do so within 30 days</td>
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<tr>
<td>Sign Docs</td>
<td>61%</td>
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<td>Reduced time from search-to-lease</td>
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<td></td>
<td>$$$$</td>
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<tr>
<td></td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Leases closed by an associate broker for $1.3M of commission revenue in one year</td>
</tr>
</tbody>
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BENEFITS FOR THE TENANTS
Impact to Tenants

- **Search Space**: 2 minutes
  To get personalized results

- **Price Transparency**: Compare
  Price transparency allows tenants to compare apples-to-apples

- **Tour Space**: 60%
  Reduction in time spent touring

- **Sign Docs**: 61%
  Reduced time from search-to-lease

- **Average savings per lease**: 19%
What’s Next?
Truss Analytics identify true tenant behavior
Rate Sessions

Excursions, etc.

Rate Speakers