

**Presented by:**

Cindy Gareau, Executive Director

**New Westminster Builder & Designer Breakfast Series**

# **CACEA, EAs & IDPs: A way to move industry forward**



**CACEA**

Canadian Association of  
Consulting Energy Advisors

## Our Mission

To support a sustainable profession of successful and credible Canadian Energy Advisors (EA).

## Our Mandate

Ensure credible, skilled members and be a valued, respected sector partner.

## Our Members

Includes EAs, suppliers, stakeholders and allies, and those in the process of becoming registered EAs.

Members across Canada access to:

- **knowledge and information;**
- a **supportive network;**
- a **unified voice** to influence change; and
- **discounts** to equipment, training, and more.


## Contact

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*CACEA promotes sustainable building practices and contributes to the following  
Canadian Home Labeling Programs:*





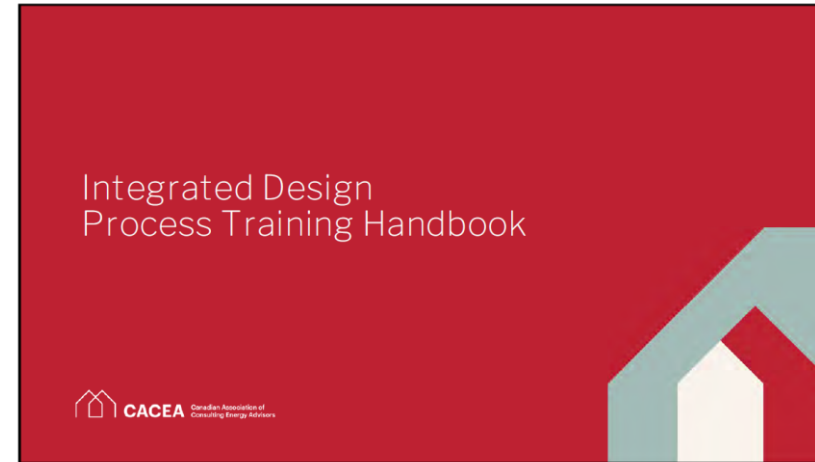
It takes a high-performance design process (IDP) to deliver an affordable, efficient, sustainable, healthy, high performance building.



# Origin of the Integrated Design Process (IDP)

- 1993 Canadian C2000 building program.
- Targeted better efficiency, IAQ, environmental impacts.
- Reduced capital costs with less costly solutions.
- C2000 Process became the IDP.

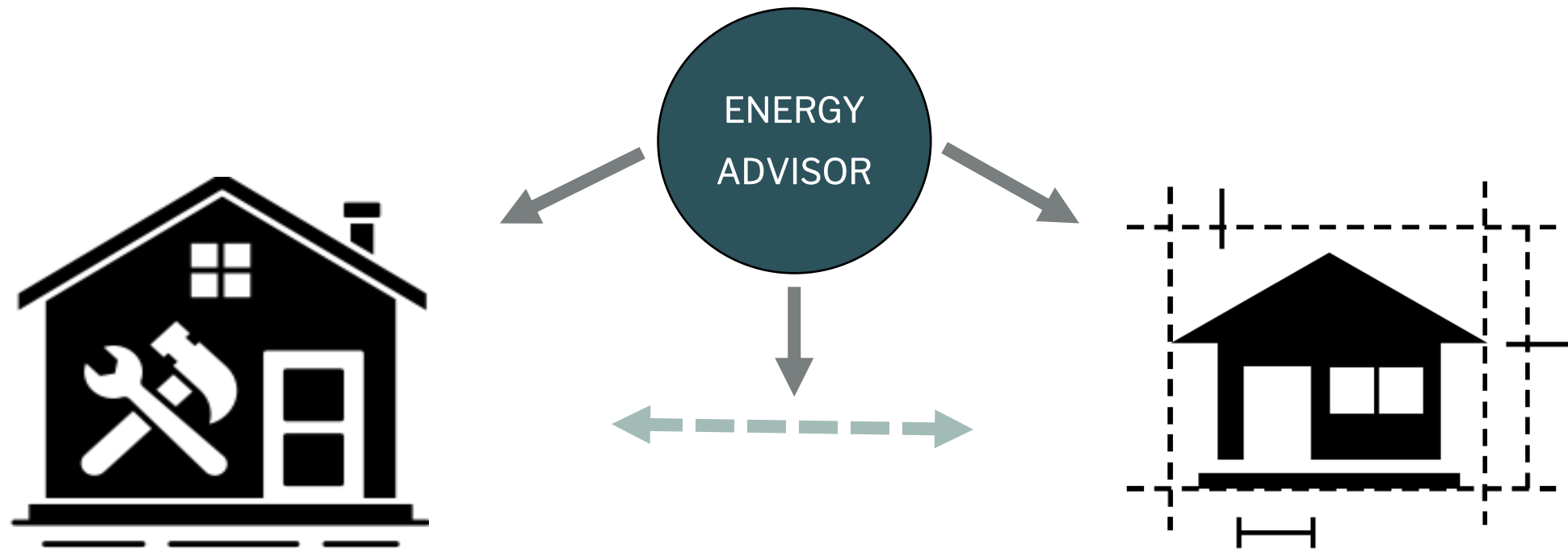
# CACEA's Engagement with IDP



<http://www.greenspacencr.org/events/IDProadmap.pdf>

[https://www.cdn.fortisbc.com/libraries/docs/default-source/rebates-and-energy-savings-documents/rebates-for-homes/fortisbc-design-offer.pdf?sfvrsn=3ff9abf9\\_0](https://www.cdn.fortisbc.com/libraries/docs/default-source/rebates-and-energy-savings-documents/rebates-for-homes/fortisbc-design-offer.pdf?sfvrsn=3ff9abf9_0)

# EA Skills & Competencies Fit IDP Goals



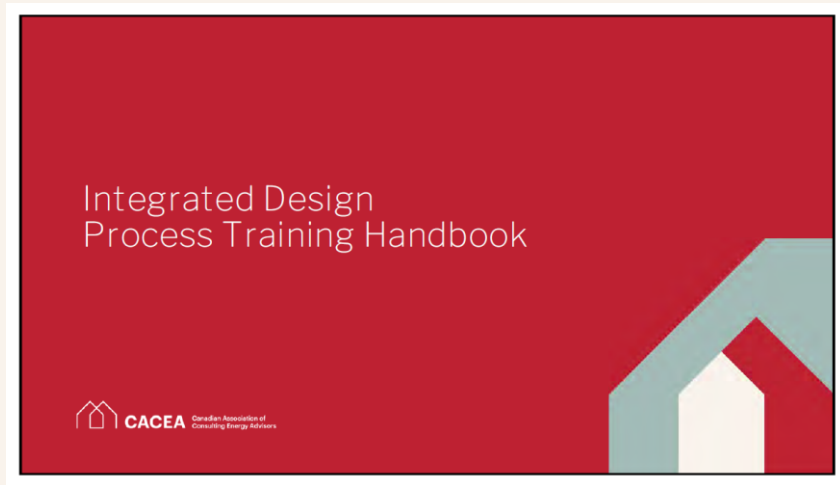
R-2000

ENERGUIDE



netzero  
home





# IDP Facilitation Training Pilot

## Mandatory “Classroom” Sessions

- Introduction to the Integrated Design Process
- Facilitation and Communication
- IDP Documentation

## IDP Shadow Sessions

- Shadow IDP Expert
- Shadow IDP Candidate

## IDP Handbook

## IDP Qualification Certificate

# What is the Integrated Design Process (IDP)?

## Integrated

- House works “as a system” so design should be “as a system”
- Many components and trades/suppliers must work together, such as framing, HVAC, insulation, airtightness, etc.

## Design

- You have “house plans”, but do you have a **plan** of how to build your house? How do all the components best fit together?

## Process

- Structured, measurable, repeatable, efficient, effective.



## Why IDP?

- Constructing and renovating homes is increasingly complicated.
- It may not make sense to add/utilize features to construction that we're used to.
- There may be opportunities to leverage synergies and consider different pathways to yield more and/or greater, benefits.
- Focus is on specific homes, climate zones, builder/clients goals as there is no single, "best" recipe.
- It is a plan for success.

# Conventional Design Process (CDP)

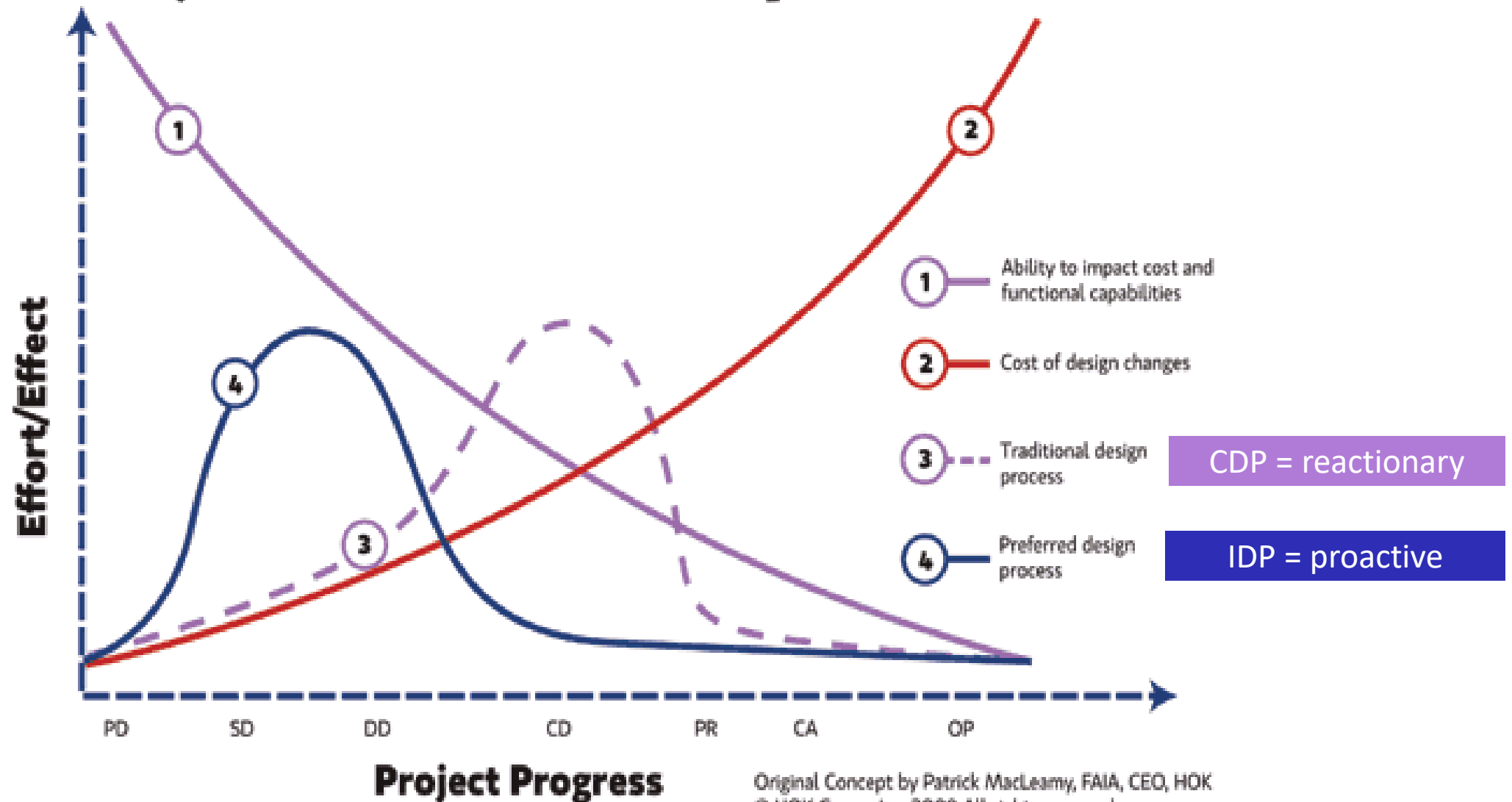
- Less time, energy and collaboration in early design stages.
- Decision made by fewer people—silo approach.
- Linear process.
- House/Building systems considered and/or designed in isolation.
- Limited, constrained optimization that solely benchmarks against building code.
- Diminished opportunity for synergies.
- Emphasis on “First” cost.



# Integrated Design Process (IDP)

- Front loaded—time and energy invested early.
- Decisions influenced by broad team, not pre-determined.
- Iterative, flexible process.
- “House-as-a-system” thinking.
- Allows for FULL optimization recognizing the occupant as the key beneficiary: Health, Comfort, Resiliency, Efficiency, Affordability, and more.
- Seeks synergies, ongoing learning and emergent features.
- Emphasizes Total Cost. May include full life-cycle costing and ROI.

# Project Effort and Impact



## Who is IDP For?

- Builder/Renovator? Trades? Suppliers?  
Design Consultants? Building  
Occupant/Homeowner? Building Officials?
- Everyone has a stake and a valued opinion.
- IDP capture as many perspectives as possible, as early as possible, for the given application and end goal.
- May, or may not be directly involved with a specific project.

# Integrated Design Teams (IDT): A MINDSET

MINDSET	PRINCIPLE	STRATEGIES
Inclusion and collaboration	Broad collaborative team	Careful team formation
Outcome oriented	Well defined scope, vision, goals and objectives	Team building
Trust and transparency	Effective and open communication	Facilitation training for team and expert facilitation
Open mindedness and creativity	Innovation and synthesis	Visioning “discovery meetings” – with comprehensive planning / brainstorming
Continuous learning and improvement	Systematic decision making	Goals and targets matrix / decision making tools
Rigour and attention to detail	Iterative process and feedback cycles	Post occupancy, project evaluation/ commissioning

# Effective IDP Structure

1. Discovery
2. Benchmarking and Optimization
3. IDP Delivery (Charrette)





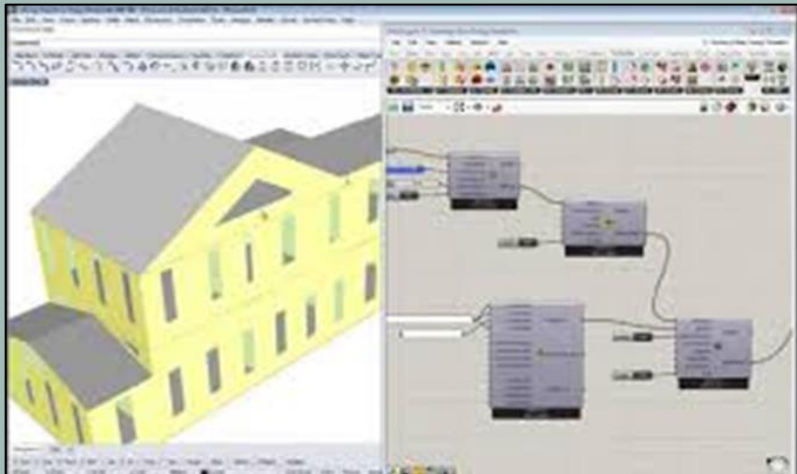
**The Discovery Phase is where the facilitator and client identifies the vision and addresses the following:**

- Identify current state.
- Target project information.
- Identify the Benchmark and Optimization planning.
- Design the Charrette agenda and presentation requirements.
- Identify the IDP vision and requirements.
- And more.



# Benchmarking and Optimization

- Iterative energy modelling.
- Application of LEEP Costing Tools.
- Renewable energy assessment.
- Identification of potential synergies.



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Select an Archetype

Select Climate location

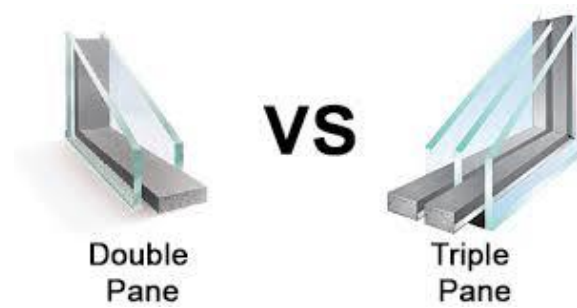
ARCHETYPE INFO		
Indicated Archetype	Atlantic	
LOCATION	OTTAWA	
CLIMATE ZONE	Zone 5	
Heating Degree Days	4900	

ARCHITECTURAL TAKEOFFS		
	Area (sq.ft.)	Area (sq.m.)
<b>ABOVE GRADE WALLS</b>		
Above Grade	260	2,407
Foundation Wall - Above Grade (if applicable)	8	85
Roof Area	9	84
Total Wall Area	275	2,576
<b>BELOW GRADE WALLS</b>		
Total Foundation Wall Area	50	464
<b>ROOF</b>		
Total Insulated Roof Area	96	8,829
<b>WINDOWS</b>		
Below Grade	0	0
Above Grade	84	776
Total Window Area	84	776
<b>FLOOR AREAS</b>		
Below Grade	68	628
Above Grade	208	1,920
Total Insulated Floor Area	276	2,548

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Canada

# Examine How Construction Practices Might Change



Window upgrade?

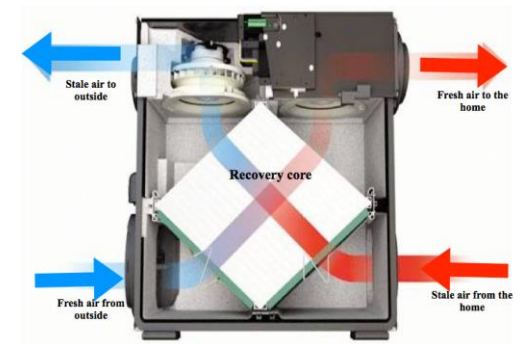


Cooling and heating?

Continuous exterior insulation?



Most practical ventilation?



# IDP Delivery (Charrette)



## Charrette



A charrette, often Anglicized to charette or charet and sometimes called a design charrette, is an intense period of design or planning activity. The word charrette may refer to any collaborative session in which a group of designers drafts a solution to a design problem. [Wikipedia](#)



# The Ultimate Goals & Benefits of IDP

- Provides a concrete, set process that is efficient, repeatable, effective and tracked.
- Can engage new conversations and information related to equipment, building approaches, pro-active thinking and approaches.
- A move towards having the IDP become a standard practice Part 9 Building and renovations.

IDP is not new and is long overdue  
to be used properly and effectively  
for today's construction.

# IDP Final Thoughts

- Clear set targets are becoming regulated
- Codes are moving. National and Provincial initiatives driving the Standards forward
- Consumer expectations are increasing.
- House-as-a-system thinking is CRITICAL.
- High Performance construction = possible higher risk of issues
- Leverage the experience and expertise of the IDT team.
- Start considering the bigger picture.

Some real life examples about the  
value of a good facilitator &  
educational opportunities





Einar Halbig  
IDP Facilitator



**Context:** Townhouse developer

**EA Contribution:**

Changed construction specs for his Step 3 townhouses based on equivalent high-level IDP processes on 2 other projects and discussing the modelling results of his upcoming Step 3 project.

**Benefits to the Builder:**

*“Turns out he (the builder) can save himself about half a million dollars on his project depending on which set of options he chooses. Plus, based on his working with us for the past 2-3 years and us keeping in good communication with him (including explaining that we can, and want, to help him and his ... team optimize his construction specs) he is now starting to feel like we are a valuable part of his team and he includes us in more and more of his decision making.”*

*“While this 3rd project wasn’t due to a formal IDP, the basic steps are there from the previous 2 projects and exemplifies how an IDP can save developers some big \$\$.”*

**Additional Comment on EAs as IDP Facilitators:**

*“Having an EA act as facilitator: as EAs we are product agnostic- we don’t promote a particular product or material or system. We are supposed to know about a whole range of options and then help our Clients find the best choices for them. What this means is that an EA acting as a facilitator would/should take the same approach and not favour one particular product or system over another. An EA should be able to help the team assess different options and lead them to arrive at the best solutions for the Client. Even with items that an EA may not be familiar with, he/she would be a good person to facilitate while NOT pushing an agenda, because that’s how EAs are supposed to operate.”*



Questions?

# Thank you