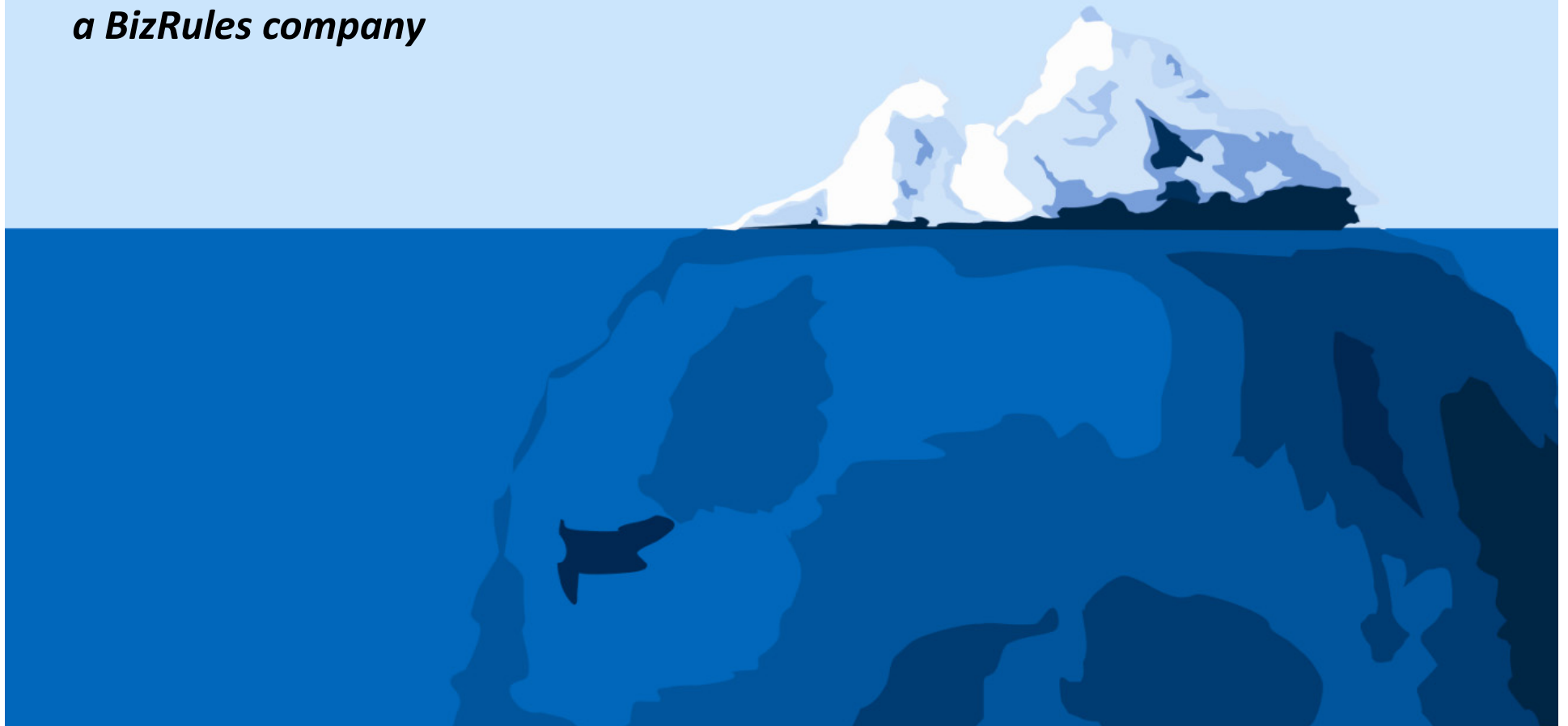


# On Knowledge Management

*October Rules Fest ORF2008 Dallas, TX USA*

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# What is Knowledge Management?

Transforming tacit knowledge into explicit knowledge so it can be retained, shared and automated

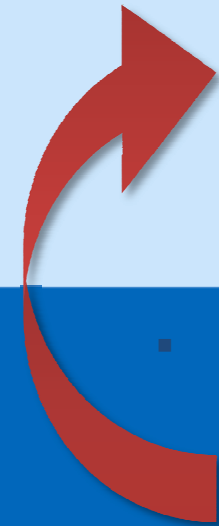
## KNOWLEDGE

### ▪ EXPLICIT KNOWLEDGE i.e. INFORMATION

- Tangible
- Visible knowledge
- Public
- Can be accessed by third persons
- Once shared, it belongs to everybody
- Can be seen “above the water”

### ▪ TACIT KNOWLEDGE

- Intangible
- Invisible knowledge
- Private
- Can be accessed on the first-person basis only
- Hidden “underwater”



# What is Knowledge Management?

*"Knowledge management is about connecting **those who know** with **those who need to know** by leveraging knowledge transfers from one-to-many across the **Global Army Enterprise.**"*

US Army KM Manual

# Knowledge Management

Learn → Knowledge Acquisition  
Model → Knowledge Representation  
Automate → Knowledge Engineering



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Knowledge

## Common Knowledge    Critical Knowledge

- experience
  - what I know
  - Know-what to do when everything is working
  - Know-what to do because it happens all the time
  - Know-who to call when everything breaks
  - know-this
  - know-that
- expertise and judgment
  - how I think
  - know-what to do when everything breaks
  - know-what to do when no one has done this before
  - know-what really what matters
  - know-what can be safely ignored
  - **Know-what we know** and what we don't know
  - know-how to make critical decisions
  - know-how to make macro decisions
  - know-how to make micro decisions
  - know-how systems work and fail
  - know-how to diagnose and solve problems
  - know-why it works
  - know-why we do it that way
  - know-why we must not do it other ways
  - know-where all the moving parts are, and how to rearrange them in new, innovative ways

## Know What We Know

***“If Hewlett Packard knew what Hewlett Packard knows, we would be three times more profitable.”***

Lew Platt, CEO of HP in the 1990's

# Typical levels of domain expertise and knowledge

Distinguished	Proficient	Apprentice	Novice
Has decades of experience	Years of experience	Weeks or months of experience	Days, hours, or no experience at all
Gives more sophisticated advice	Specific advice	General advice	
Handles the most complex cases	More complex cases	Common situations	
Wisdom	Knowledge	Information	Data
System 1 Thinking	System 1 and 2 Thinking	System 2 Thinking	

*15 years of experience...  
sometimes means 1 year of experience 15 times!*

## System 1 Thinking

- Automatic
- Effortless
- Faster to act
- Slower to adapt
- Habitual
- Reactive
- Specific-purpose

## System 2 Thinking

- Deliberate
- Effortful
- Slower to act
- Faster to adapt
- Intellectual
- Proactive
- General-purpose

Source: Keith E. Stanovich, Professor of Human Development and Applied Psychology, University of Toronto



# Macro decisions (million-dollar decisions)

***Macro decisions are strategic or tactical decisions. Examples of macro decisions that can be automated using business rules:***

- What is the best product that we should recommend for this customer?
- What is the best solution for this situation?
- What is our underwriting strategy and policy?
- What is our refund policy?
- What is our pricing strategy for next year?
- What is our discount policy this year?
- What promotions should we run?
- What should we do to improve yields and revenue?
- Where should we locate the new store?
- Where should we build the plant?
- Where should we locate the distribution center?
- Where should we hire the employees?
- What Legal Entity structure should we use for this company?
- What Legal Entity should we use for this contract?
- Should we create a new legal entity for this deal?
- What is the best way to structure this deal?
- How do we design this plant so as to prevent and contain fires? How do we clean up this oil spill?
- How do we minimize tax and maximize revenue for this contract?
- How should we record these types of accounting transactions?
- Do we follow mark to market rules or use judgment?
- How do we calculate this quarter's tax provision?
- How do we solve this customer's mission critical problem right now?
- How do we troubleshoot this problem?

# Micro decisions (a million little decisions)

***Micro decisions are operational decisions.  
Examples of micro decisions that  
can be automated using business rules:***

- Is the customer eligible for the product?
- Is the customer entitled to the promotion?
- What is the sales price for this item?
- What is the best deal for the customer?
- What is the best deal for us?
- What discounts is the customer entitled to?
- What should I up-sell right now?
- What should I cross-sell right now?
- What is the highest available commission (HAC)?
- What is the lowest available fare (LAF)?
- What is the best product for this customer?
- What credit card does the customer prefer to use?
- How does the customer prefer to be contacted?
- What are the customer's privacy preferences?
- Do I have all the information I need to save this record in the system?
- How do I work-around the bug or limitation in the system?
- Who should we assign as the company contact person for this sale?
- What options should my ATM display for this customer?
- What options should my Interactive Voice Response (IVR) system provide for this inbound phone number?
- To which representative should this call be routed?
- What offer should I print on the bottom of this particular monthly statement?
- ... and so on.

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# Thank you

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