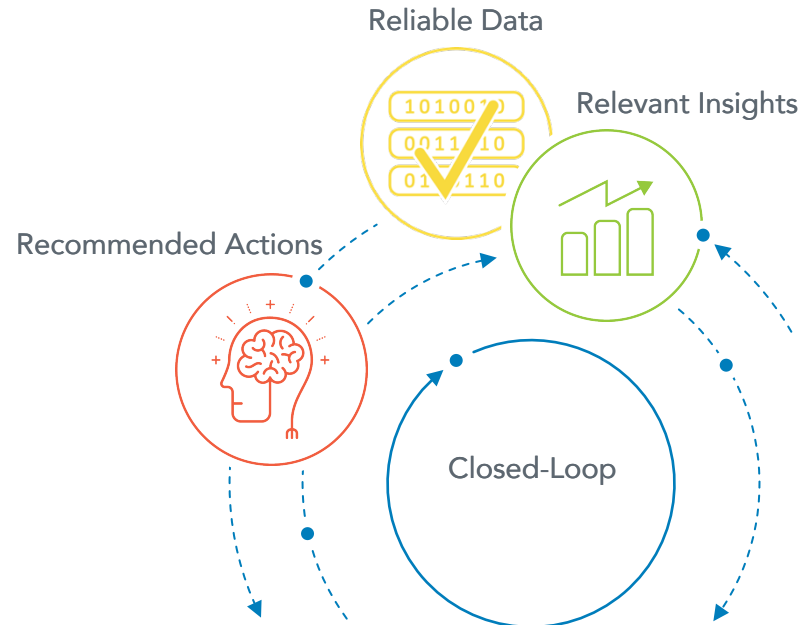


# MASTER DATA MANAGEMENT: A DATA MANAGEMENT DISCIPLINE BOOSTED BY GRAPH AND AI TECHNOLOGY

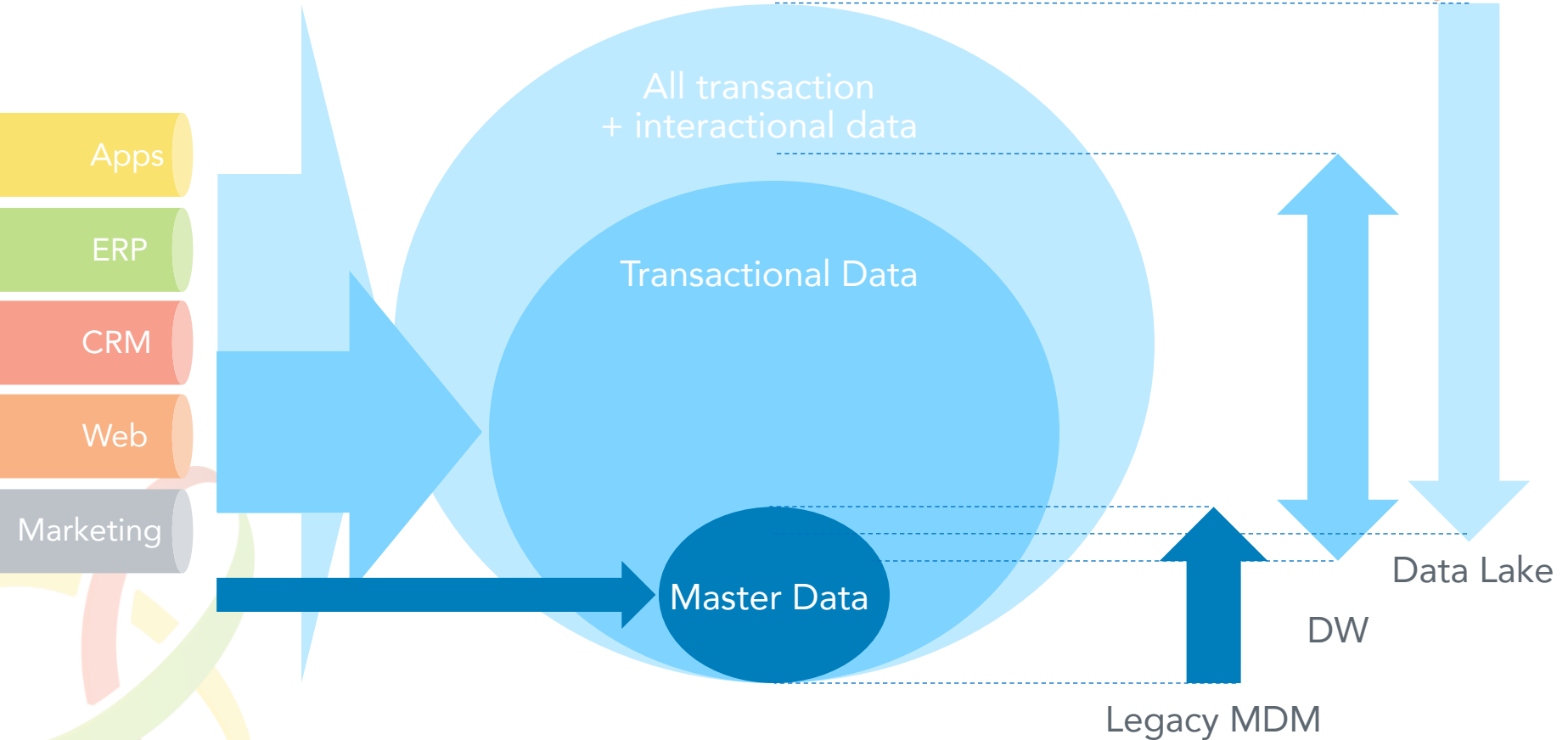
4<sup>th</sup> July 2018

**Matt Gagan**  
Senior Solutions Consultant



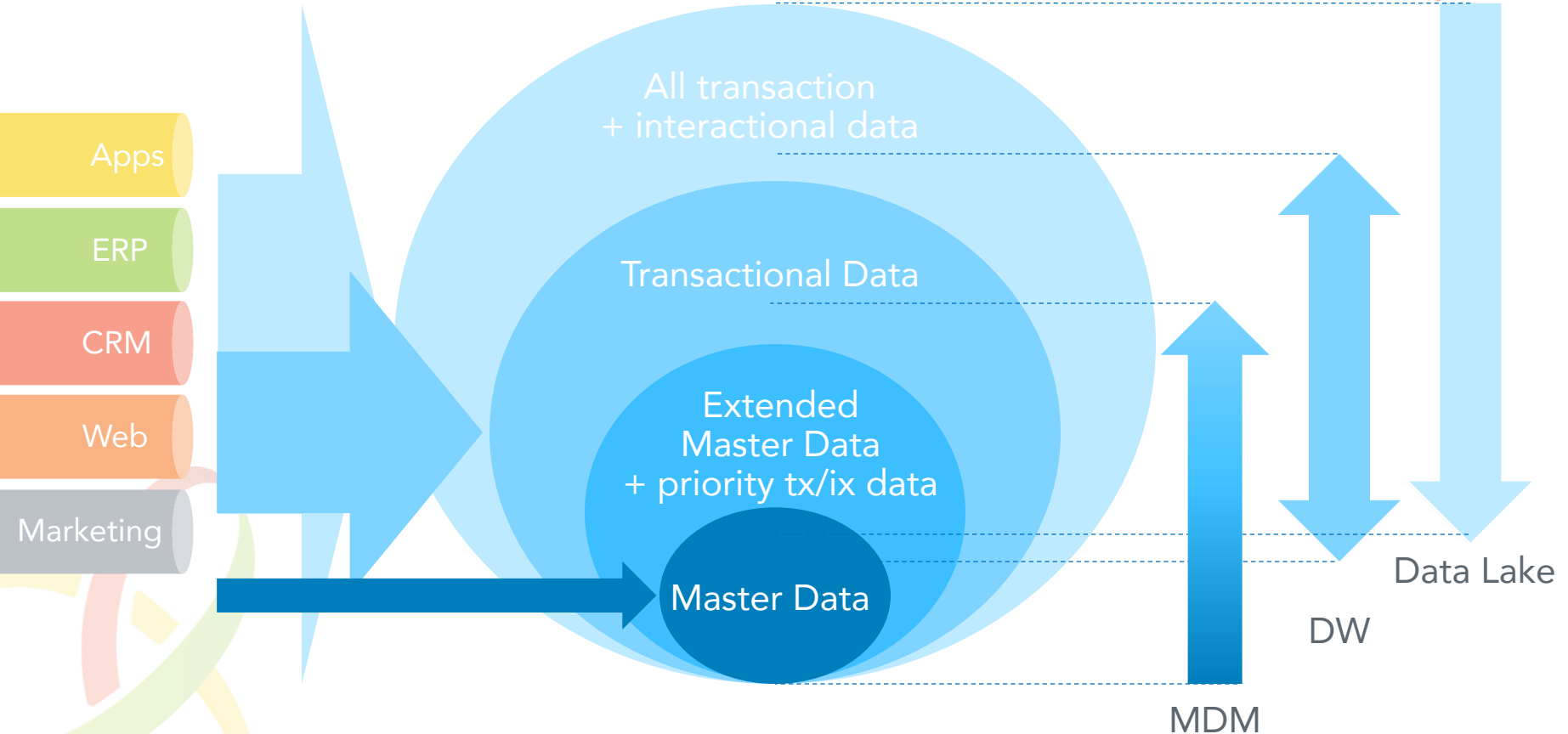
# LEGACY APPROACH TO MDM

CUSTOMER 360 IS ASSEMBLED OUTSIDE MDM, VIA BATCH OPERATIONS



# MODERN DATA MANAGEMENT

CUSTOMER 360 IS ASSEMBLED IN MDM, IN REAL TIME



# RELTIO: CUSTOMER 360 WITH EXTENDED MASTER DATA



Profile

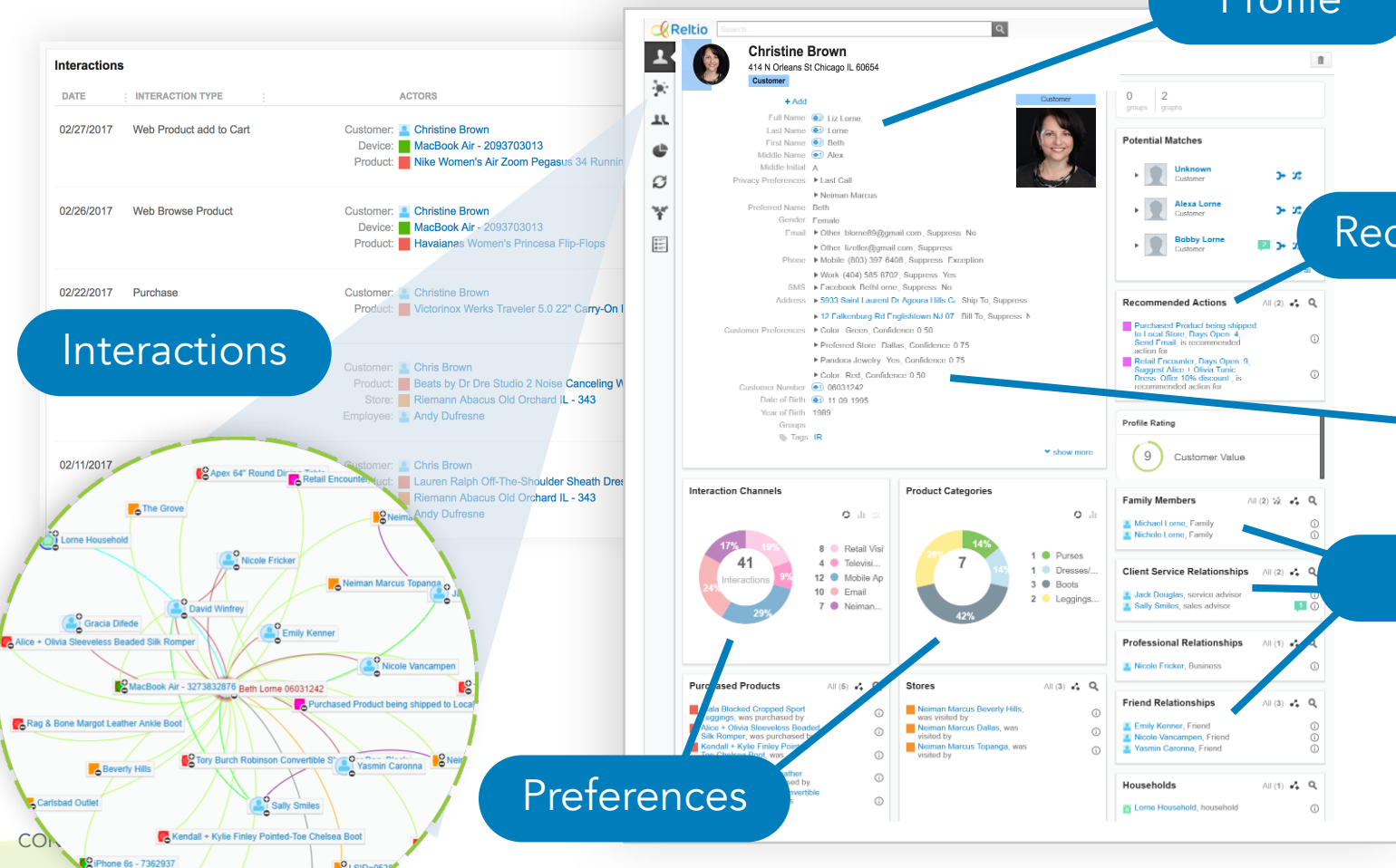
Recommendations

Insights

Relationships

Interactions

Preferences



# AS A CUSTOMER SERVICE AGENT...



Give me these three things:



An **accurate, up to date** view of the member's profile



Visibility into the member's **relationships/influences**



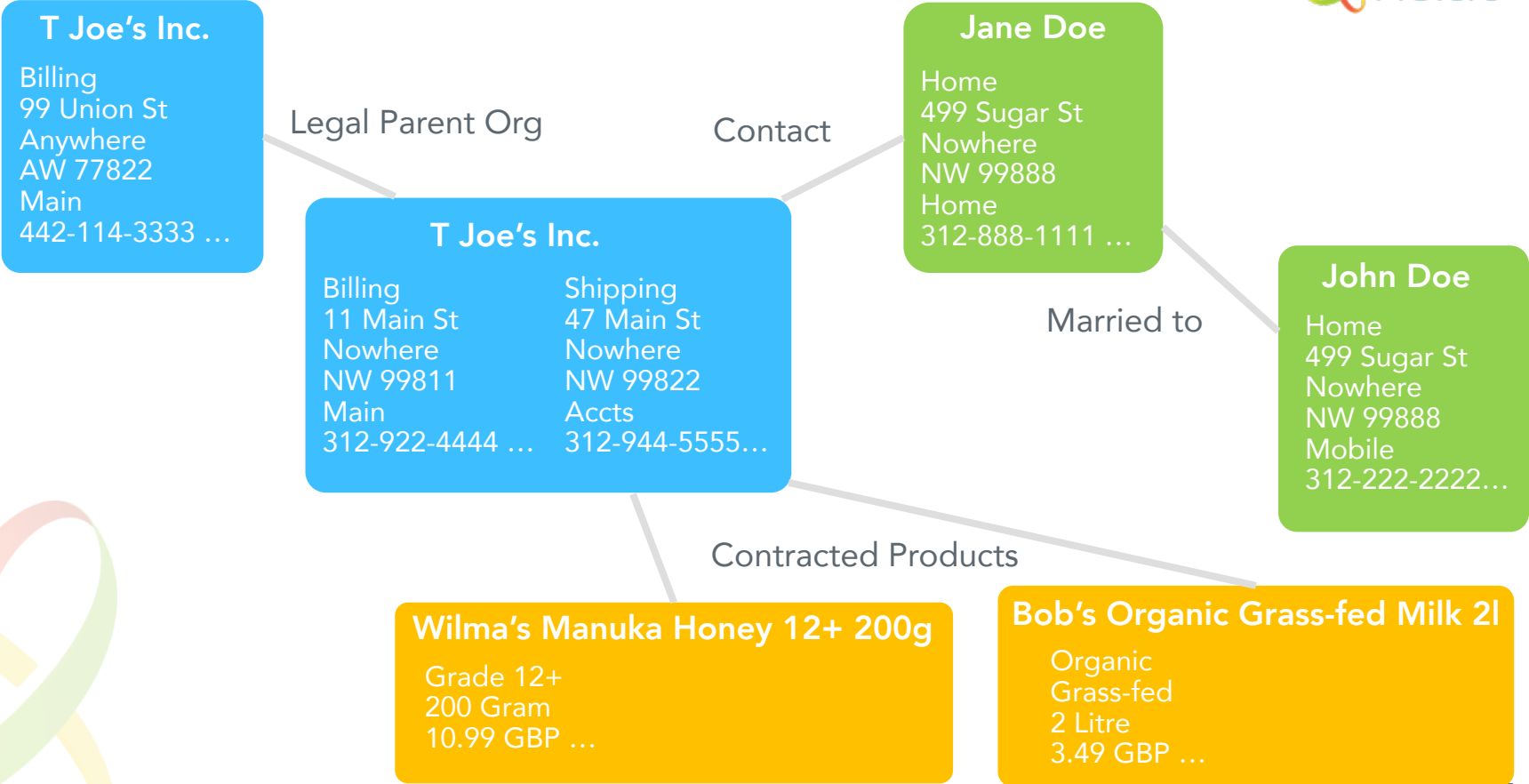
Access to the member's **interactions** and **transactions**

... and I will provide an exceptional member experience

# Multi-model Approach



# COMPLEX B2B MASTER DATA



# A MODERN, MULTI-MODEL ARCHITECTURE



## Graph Database

gtu3sz	HasContact	tp8q23
tp8q23	HasSpouse	hy2alq
sfg12x	HasLegalChild	gtu3sz
gtu3sz	HasContractedProd	6yhjt2
gtu3sz	HasContractedProd	h6bt39



## Enterprise Search

Jane	tp8q23
John	hy2alq
Doe	hy2alq tp8q23
Sugar	hy2alq tp8q23
499	hy2alq tp8q23
Nowhere	hy2alq tp8q23 gtu3sz
NW	hy2alq tp8q23 gtu3sz
99888	hy2alq tp8q23



## NoSQL, Columnar Database

tp8q23	Name: Jane Doe Address: {Type: Home A1: 499 Sugar St City: Nowhere State: NW PC: 99888} Phone: {Type: Home Num: 312-888-1111} ...
hy2alq	Name: John Doe Address: {Type: Home A1: 499 Sugar St City: Nowhere State: NW PC: 99888} Phone: {Type: Mobile Num: 312-222-2222} ...
sfg12x	Name: T Joe's Inc. Address: {Type: Billing A1: 99 Union St City: Anywhere State: AW PC: 77822} Phone: {Type: Main Num: 442-114-3333} ...
gtu3sz	Name: T Joe's Inc. Address: {Type: Billing A1: 11 Main St City: Nowhere State: NW PC: 99811} Phone: {Type: Main Num: 312-922-4444} ... Address: {Type: Shipping A1: 47 Main St City: Nowhere State: NW PC: 99822} Phone: {Type: Accts Num: 312-944-5555} ...
6yhjt2	Name: Bob's Organic Grass-fed Milk 2l Organic: True Grass-fed: True Size: {Quantity: 2 Unit: Litre} Price: {Price: 3.49 Currency: GBP} ...
h6bt39	Name: Wilma's Manuka Honey 12+ 200g Quality: 12+ Size: {Quantity: 200 Unit: Gram} Price: {Price: 10.99 Currency: GBP} ...



# Opportunities for AI

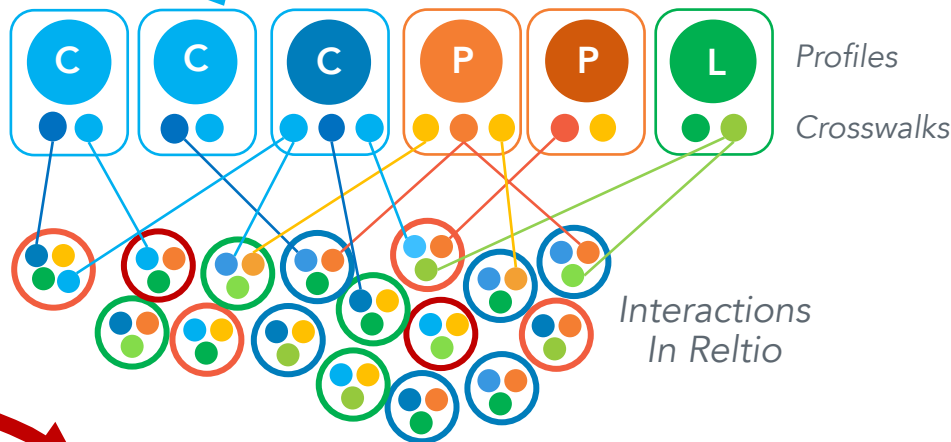
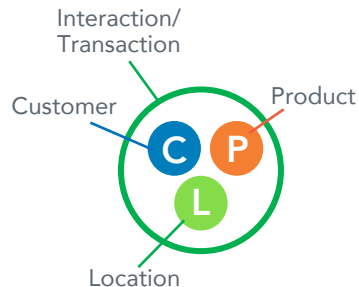




# ORGANIZE: RECONCILE, UNIFY



Matching and merging effectively pulls  
Crosswalks together into Profiles in Reltio





# ORGANIZE: ENRICH

Simple analysis of objects linked via common transactions and interactions can be used to relate Profiles in Reltio

3<sup>rd</sup> party data can be matched to and enrich Profiles in Reltio

3<sup>rd</sup> Party

POS

Web Cart

Web Browse

Web Purchase

Profile

Insights

C

P

P

L

Relationships

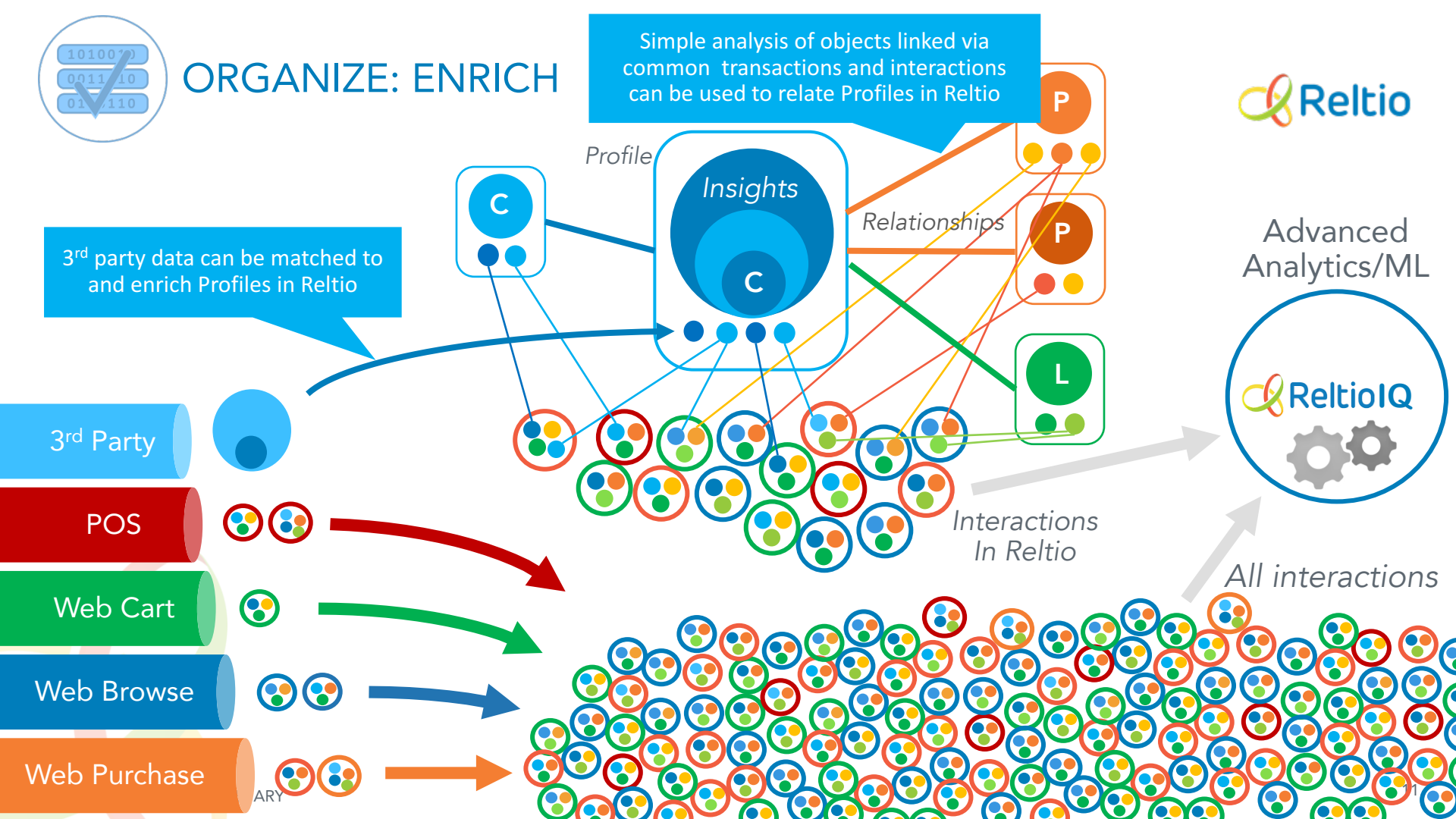
Interactions  
In Reltio



Advanced  
Analytics/ML



All interactions





# RECOMMEND

★ Deeper analysis of transactions and interactions can be used to enrich Profiles in Reltio with Insights

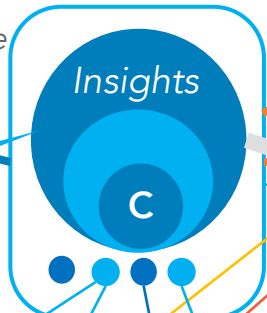


Recommendations

★ Deeper analysis of transactions and interactions can be used to create Recommendations for Profiles in Reltio



Profile



Relationships



Advanced Analytics/ML



Interactions In Reltio

All interactions

3rd Party



POS



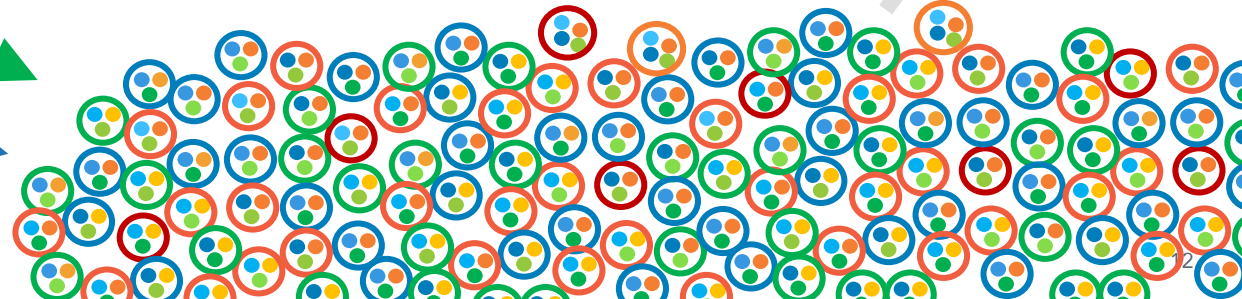
Web Cart



Web Browse



Web Purchase





# MEASURE & IMPROVE

★ The Recommendations and Insights drive ongoing interaction with customers, resulting in measurable behaviour changes

3<sup>rd</sup> Party

POS

Web Cart

Web Browse

Web Purchase

3<sup>rd</sup> PARTY

R R R

Recommendations

C

Profile

Insights  
C

Relationships

P

P

L

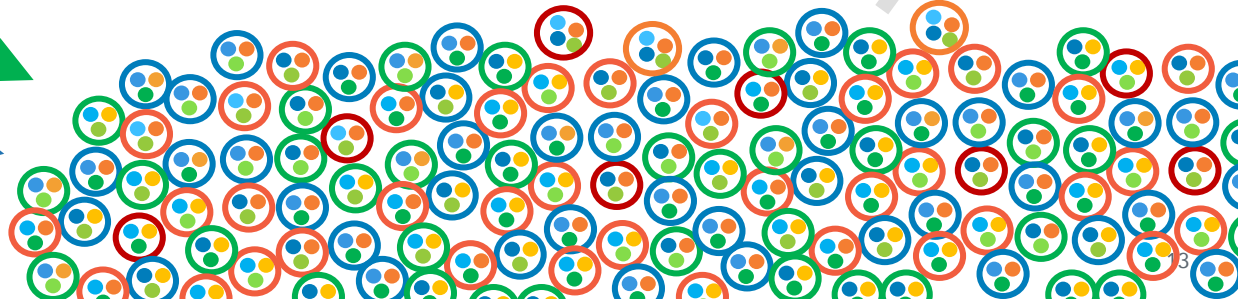
Interactions  
In Reltio

Advanced  
Analytics/ML



All interactions

★ Tuning of Insights and Recommendations generation can take advantage of ML techniques, generating better results





# MATCHING & MERGING SELF-LEARNING



Match



Confident

Potential



Profiles

Crosswalks

Merge

Rules

Supervised learning opportunity exists, to profile initial data sets, invite expert user/steward to indicate match/nomatch situations, and to generate an initial ruleset

"Confident" rules result in automatic merging  
"Potential" rules result in potential match suggestions, requiring human stewardship (merge, or no-match decisions)  
AI Opportunity:  
If a particular Potential rule always results in a merge, it should be suggested as being promoted to a "Confident" rule, removing the stewardship



# MATCHING & MERGING SELF-LEARNING



## Rules



“Confident” rules result in automatic merging  
“Potential” rules result in potential match suggestions, requiring human stewardship (merge, or no-match decisions)  
AI Opportunity:  
Records may occasionally be unmerged  
If a common “Confident” rule exists across unmerge situations, it should be suggested as being demoted to a “Potential” rule

# Customers

<https://www.reltio.com/customer-success-stories/>

# Thank you

