



Highly Confidential

Real Quality Rating (RQR)

For a Better Use of Public Savings in
Real Estate

FIDJI, September 2017

Outline

- Quality is an essential piece of information for decision-making, as important as prices
- *Market prices* are available, but *Market quality* is hidden
- Existing ratings and certifications are plenty, but they are not very useful for investment managers : they are specialized, expensive, and do not allow for benchmarking analysis
- Our solution consists in providing the best estimate of how market participants judge the quality of your assets and in explaining why
- Use cases: asset management, fund management, financial communication, HR
- 2 recurring information exchange processes
 - Quality judgment model elaboration
 - Implementation



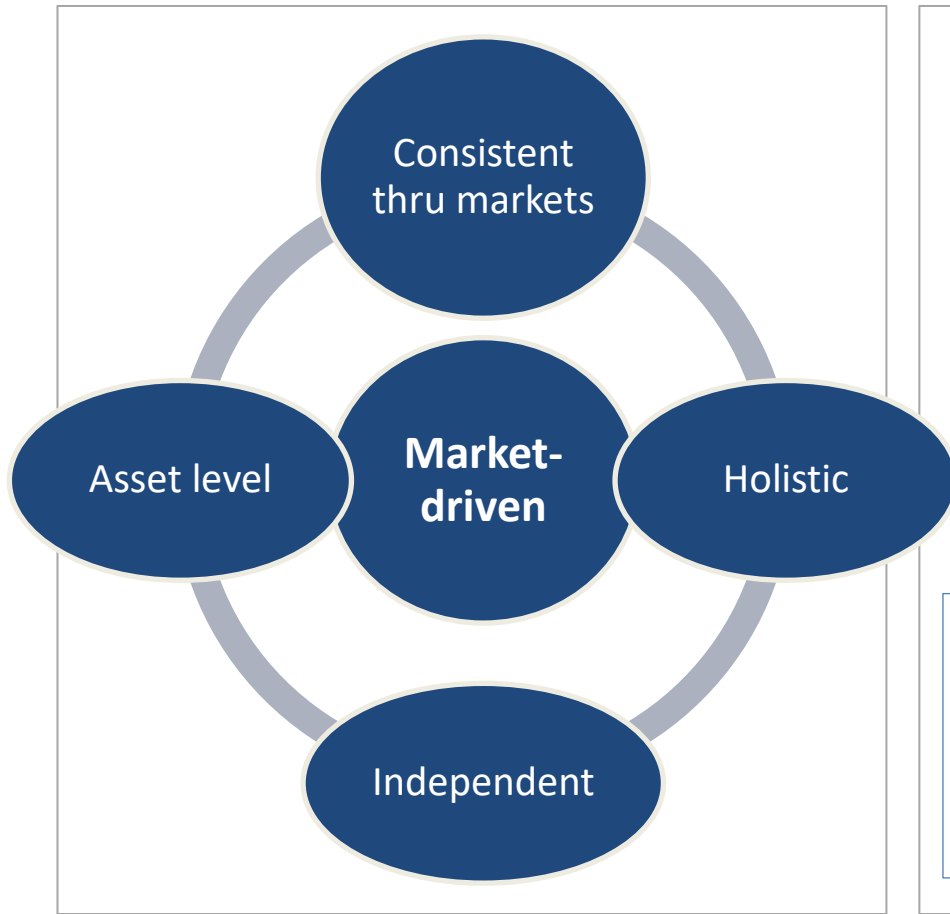
We power your decisions with Market Quality insights

The Issue

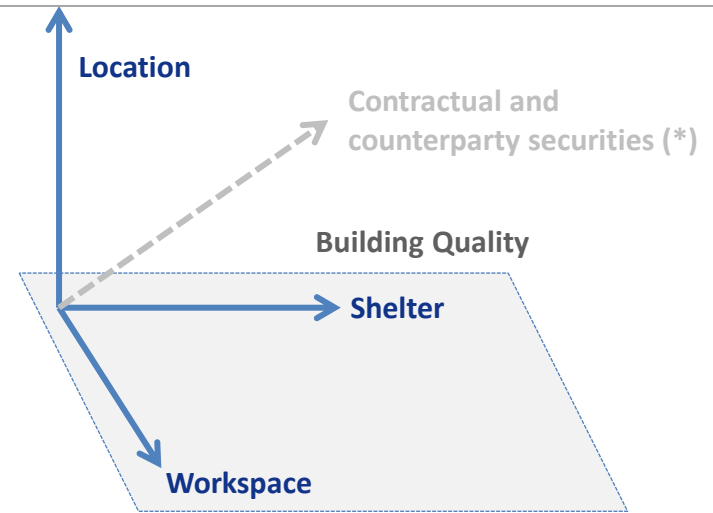
- An efficient market requires information on
 - Prices
 - Quality (Akerlof and Spence, 1972)
- But market quality is hidden
 - Information on building quality is confidential
 - Stakeholders' preferences are hidden
 - RE markets are fragmented into micro OTC markets
- Consequences
 - Market prices partially integrate quality
 - How can funds be optimally allocated?
 - How can value creation and depreciation be measured?

Concept

Rating Requirements



Quality Rating Components*



Location

(27 items)

Accessibility
Environmental Quality
Standing

Shelter

(61 items)

Aesthetics
Sustainability
Environmental Perf.
Facilities
Risk Prevention

Workspace

(38 items)

Productivity
Internal Conditions
Telecom Infrastructure

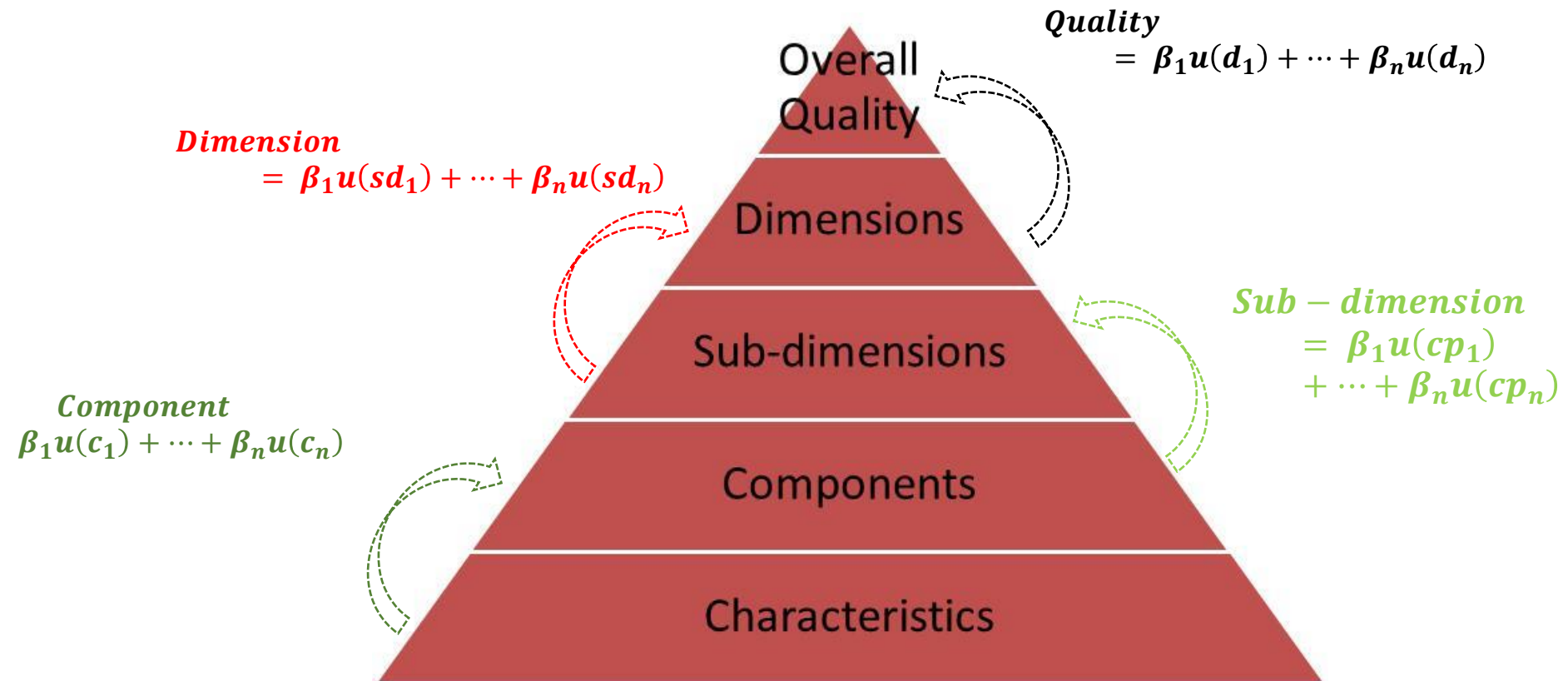
Market-driven rating system based on stakeholders' collective intelligence

*: including tenants' credit, lease term, etc. will be introduced in future versions of the rating

Modelization

The Model

- Frequency of update: annual



▶ Bottom up quality judgment model

Data dictionary

Définition des variables

Définition des modalités

	Name of the variable	Definition	Type of function	Strategic utility	-2	-1
9	Open Spaces	Major open spaces are possible (> 50% NLA building)	BAN	BASICS		Impossible
10	Convivial	Presence of convivial spaces (coffee room, kitchen, nap room, gaming room...)	BAP	PLUS		
11	Circulation	Access to toilets, elevators and meeting rooms	BAN	BASICS		Parts with distance to lift greater than 20m, on more than 50% of the floors
12	Steps	Steps on the floor	BAN	BASICS		Presence on more than 30% of the floors
13	Corridor	Width of corridors	BAN	BASICS		Narrow (width < 1.4m)
14	Elevator distribution	Easiness to access to an elevator from any point of the floor	BAN	BASICS		Substantial parts of the floorplate distant from any elevator (requires walking across the whole floor)
15	Freight elevator	Presence of a dedicated freight elevator	BAP	PLUS		
16	Transfer	Elevator transfer needed between upper floors and parking level	GAN	RISKY	No access to parking	Discontinued shaft
17	Upper transfer	Elevator transfer needed between upper floors	BAN	BASICS		Discontinued shaft within upper floors
18	Stairs	Easiness to use stairs as a substitute to elevators : distance between stairs and elevators.	GAN	RISKY	More than 10m and no natural light	More than 10m or no natural light
19	ITC	Presence of individual thermal control (thermostat) at each floor	BAP	PLUS		
20	HVAC-Type	Type of HVAC	GAP	WAHOU		
21	HVAC-Age	Age of the system or number of years since last system modernization	GS	KEY	Age > 20 years	10 < Age ≤ 20
22	Ventilation	Air renewal system	BAN	BASICS		Absence
23	Ceiling height	Ceiling height (meters), between ceiling and raised floor	GS	KEY	H ≤ 2,4	2,4 < H ≤ 2,8
24	Light control	Controllability of lighting (ability for the occupier to adjust individually the light level)	BAP	PLUS		
	Daylight	Percentage of floor area directly exposed to daylight. Estimated as the 6m radius area	GS	KEY	% < 50%	50% ≤ % < 60%

▶ Definition of a globally consistent “real” data dictionary

Explicit preferences

« Normes subjectives »

- Le discours intégré dans les normes sociales subjectives

The image displays a survey interface for DAUPHINE UNIVERSITÉ PARIS. The desktop view on the left shows a survey question: "11. Veuillez distribuer 10 points en fonction de l'importance des composantes qui déterminent la productivité de l'espace de travail". Below the question are five options, each with a score of 0 and a description:

- Flexibilité des plateaux:** Capacité à modifier facilement le cloisonnement et la disposition générale de l'espace de travail sans intervention majeure
- Capacité à densifier l'occupation** dans l'espace de travail
- Capacité à développer des espaces de co-working**
- Efficacité des circulations horizontales:** capacité à aller facilement d'un point A à un point B du même niveau
- Efficacité des circulations verticales:** capacité à changer d'étages, qualité des ascenseurs et des escaliers

A progress bar below the options shows 0% completion. The mobile view on the right shows the same survey question and options on a smartphone screen. The mobile interface includes a QR code in the top right corner and a progress bar at the top of the screen showing 0% to 100%.

Survey Powered By [Qualtrics](#)

Implicit preferences

Case study

QUALITE DE LA LOCALISATION

Accès à l'immeuble

Q6. Transports en commun

a. Proximité des stations de transport en commun (temps de marche) **b. Nombre de stations de transport en commun à moins de 10 minutes à pied**

15 min ou plus | 10 à 14 min | 5 à 9 min | 2 à 4 min | Moins de 2 min

0 ou 1 | 2 | 3 et plus

c. Proximité des gares régionales ou nationales (en transport en commun) **d. Proximité des aéroports (en temps de transport en commun)**

60 min ou plus | 45 à 59 min | 30 à 44 min | 15 à 29 min | moins de 15 min

2 heures ou plus | 1h30 à 1h59 | 1h à 1h29 m | 30 à 60 min | Moins de 30 min

Q7. Dynamique du quartier

a. Nombre de commerces de détails dans un rayon de 300 mètres, y compris restaurants et bars **b. Densité moyenne de la population de la commune et de ses communes limitrophes**

Moins de 5	5 à 29	20 à 49	50 à 199	200 ou plus	Moins de 10 hab./ha	10 à 49 hab./ha	50 à 99 hab./ha	100 à 199 hab./ha	Plus de 200 hab./ha
Ex : Landy, Boulogne-Bièvre	Ex : Saint-Ouen, Stains	Ex : Courbevoie, Boulogne	Ex : Paris 15 ^e , Levallois	Ex : Quartier St Michel Paris, Bd Haussmann Paris	Ex : Landy, Longjumeau	Ex : Orlly, Noisy	Ex : St Maurice, Clichy	Ex : St Maurice, Courbevoie	Ex : Paris 17 ^e , Levallois

c. Effectif et densité des salariés du tertiaire dans la commune

Groupe 5 (Très faible)	Groupe 4	Groupe 3	Groupe 2	Groupe 1 (Très élevé)
ex : Besançon, Dunkerque, Colmar	ex : Versailles, Amiens, Marseille 7 ^{ème}	ex : Vincennes, Lyon 3 ^{ème} , Tours	ex : Montreuil, Lyon 2 ^{ème} , Bordeaux	ex : Paris 9 ^{ème} , Levallois, Bay-les-moulières

Q8. Accès en voiture

a. Etat du trafic habituel en semaine (8h du matin) **b. Nature de la voie attenante à l'immeuble**

✓ Fluide
▪ Dense
▪ Saturée

✓ Sans unique
▪ Double sens

c. Dimensionnement des places de parking relativement à l'effectif de l'immeuble

✓ Insuffisant
▪ Suffisant

Q9. Centralité

a. Distance par rapport au centre de la métropole

Plus de 10 km | 6 à 9 km | 3 à 5 km | 1 à 2 km | Moins de 1 km



Judgement

Close Preview Restart Survey

Place Bookmark

1.4. LOCALISATION

1.5. ACCES A L'IMMEUBLE

1.6. Comment évaluez-vous la proximité des infrastructures de TRANSPORT EN COMMUN ?

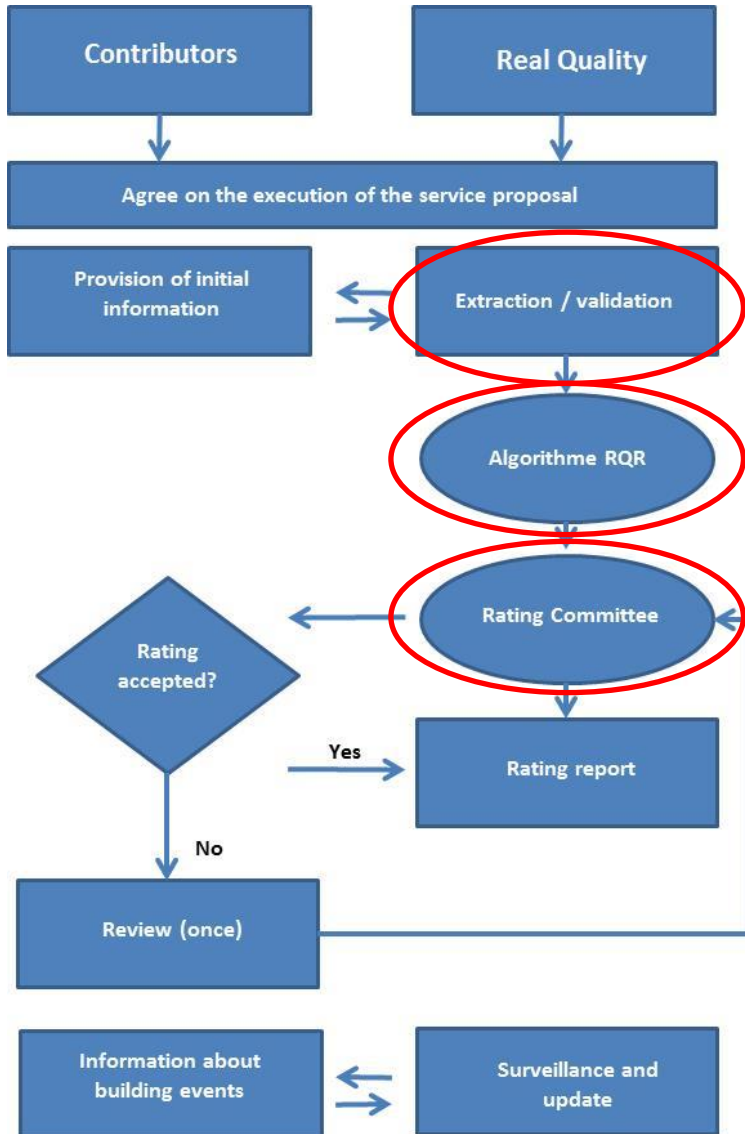
Extrêmement mauvais
Mauvais
Légèrement mauvais
Ni bon ni mauvais
Légèrement bon
Bon
Extrêmement bon

1.8. Comment évaluez-vous l'accessibilité de l'immeuble en VOITURE ?

1.9. Comment évaluez-vous l'immeuble du point de vue de la proximité au CENTRE de la métropole ?

Implementation

Rating Process



- ✓ No additional workload
- ✓ Contributors provide data in native format
- ✓ RQR extracts the information



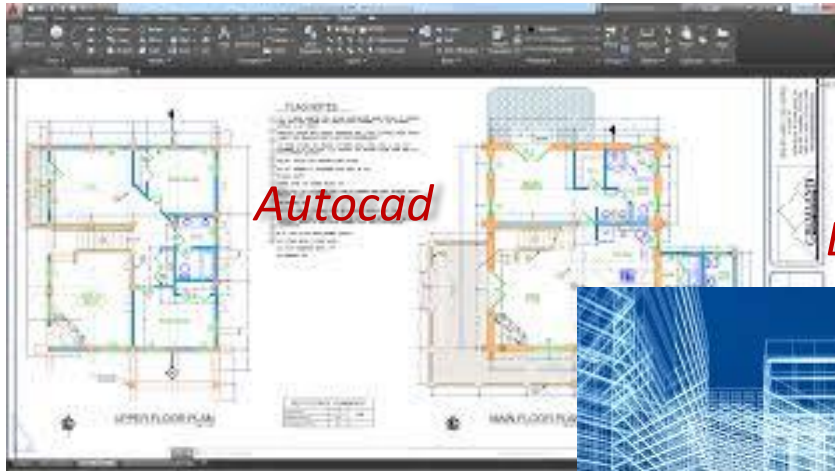
Real data structured and usable

What Inputs?

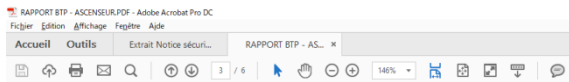
Purpose	Data	Source
Property ID	Address, name, GFA, NLA	Contributors
Real data (tangible and intangible)	Building-side data: e.g. floorplate modularity, efficiency of vertical transportations...	Contributors and public information
	Location: access to economic opportunities, natural and social risks/nuisances	Public information
Validation	Photos, virtual visit, plans, certifications, relevant technical reports	Contributors
Financial data	Property (OMRV, Vacancy rate, NCF), Lease (tenant ID, lease term)	Contributors

▶ Implementing the solution does not imply any meaningful increase in workload

Challenge of Formats



BIM



CARACTERISTIQUES	
Emplacement (bâtiment, escalier, etc.)	Hall principal
N° du constructeur	N° F.Y.F27
Charge nominale (Kg)	630 Kg 8 personnes
Vitesse nominale (m/s)	0,63 m/s
Mode d'entraînement	Adhérence
Isolé ou en batterie	Isolé

PDF (texts/plans)

PROJET DE BÂTIMENT
NATURE DE L'EXPLOITATION

Etablissement à usage de bureaux et activités non publiques en rez de chaussée.

ESTIMATION DES EFFECTIFS

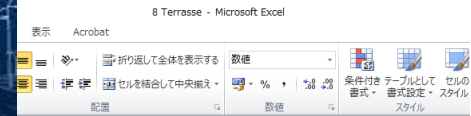
Personnel : 1 personne par 10 m² de locaux non aménagés.

Visiteurs : 1 personnes par 100 m² de locaux non aménagés.

Pictures

NIVEAU	AFFECTATION	SURFACE UTILE	PERSONNEL BUREAU	VISITEURS
6 ème	Bureau	95	9	1
5 ème	Bureau	110	11	1
		123	12	1
		123	12	1
		232	33	2
		231	23	2

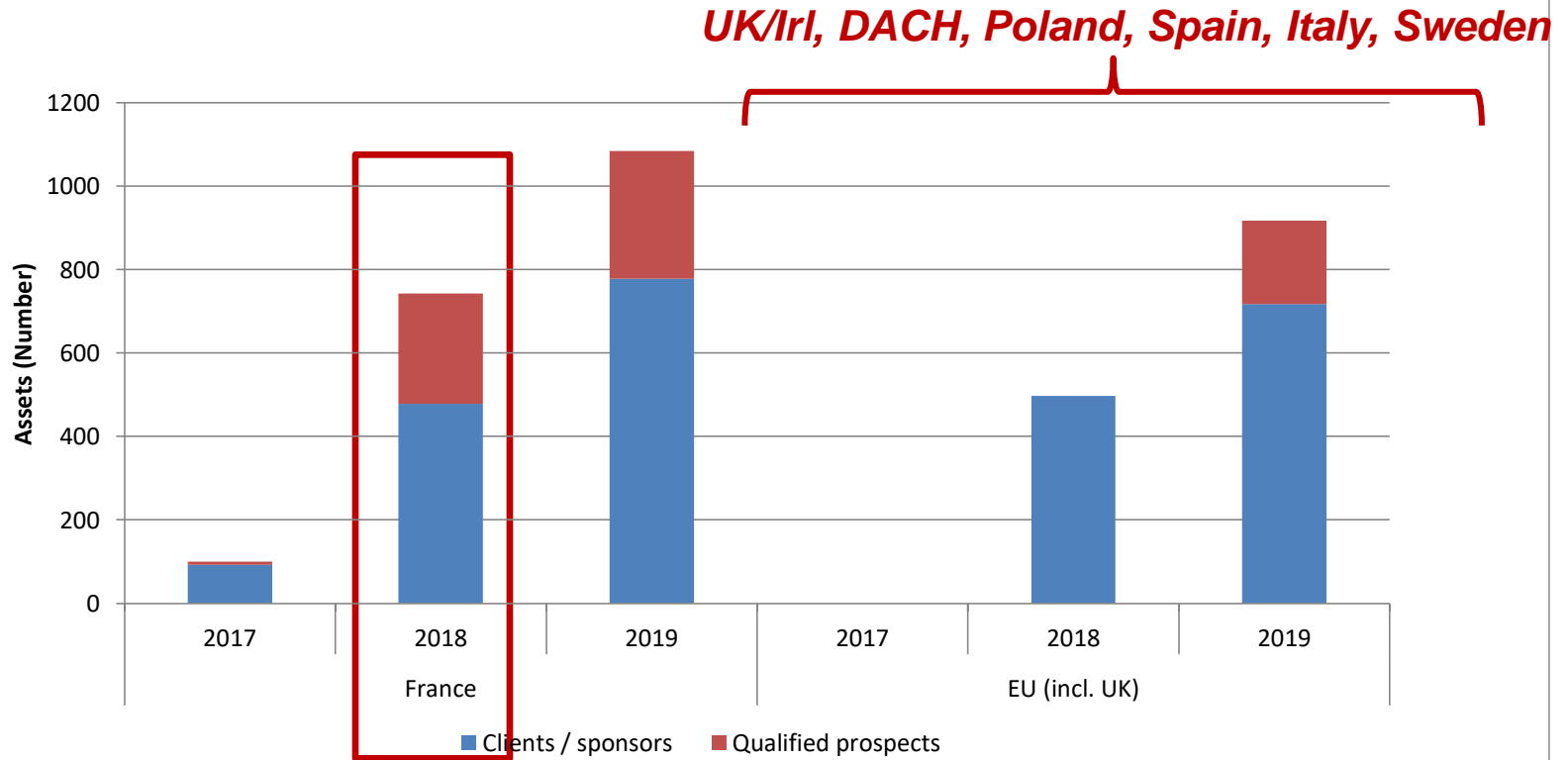
146 NF REÇUVANT PAS DE PURITE



	A	B	C	D	E	F	G	H	I	J	K	L	M
4	#####R2	ANACOUPS	//	//	3002	1	BUREAU	PARIS	20,20	09882010	34802010		R2
5	0000004R2	ANACOUPS	//	//	3004	1	BUREAU	PARIS	147,50	09882015			108 31
6	0000004R2	ANACOUPS	//	//	3009	3	BUREAU	PARIS	38,80	09882015			108 31
7	#####R2	A TRACE INTERNATIONAL	//	//	3008	2	BUREAU	PARIS	80,00	09882010	34802010		R2
8	0000004R5	OTS	//	//	3001	0	BUREAU	PARIS	143,00	09882003			108 31
9	0000004R5	OTS	19	19	5006	-1	ATIONNEME	PARIS		09882003			108 31
10	0000004R5	BHR ASSOCIES / BECOM	//	//	3010	5	BUREAU	PARIS	40,80	09882005			108 30
11	0000004R5	BHR ASSOCIES / BECOM	19	19	5003	-1	ATIONNEME	PARIS		09882005			108 30
12	0000004R5	FFPS	//	//	3011	4	BUREAU	PARIS	39,00	29892015			108 20
13	#####R2	ALL 4 IT	//	//	3008	2	BUREAU	PARIS	20,20	09882010	34802010		R2
14	#####R2	ALL 4 IT	//	//	3008	2	BUREAU	PARIS	16,80	09882010	34802010		R2
15	#####R2	ALL 4 IT	19	19	5006	-1	ATIONNEME	PARIS		09882010	34802010		R2
16	000000450	CONSERVATOIRE NTER. DE MUSIQUE	//	//	3010	4	BUREAU	PARIS	73,80	13095014			108 12
17	000000450	CONSERVATOIRE NTER. DE MUSIQUE	//	//	3014	6	BUREAU	PARIS	50,90	13095014			108 12
18	000000450	CONSERVATOIRE NTER. DE MUSIQUE	//	//	3015	6	BUREAU	PARIS	32,20	13095014			108 12
19	000000450	CONSERVATOIRE NTER. DE MUSIQUE	//	//	8001	0	BUREAU	PARIS	19,10	13095014			108 12
20	000000450	CONSERVATOIRE NTER. DE MUSIQUE	19	19	5001	-1	ATIONNEME	PARIS		13095014			108 12
21	000000450	CONSERVATOIRE NTER. DE MUSIQUE	19	19	5002	-1	ATIONNEME	PARIS		13095014			108 12
22	000000500	NECESS	//	//	3010	4	BUREAU	PARIS	91,00	08802016			108 07
23	000000504	SAAB FRANCE	//	//	3009	3	BUREAU	PARIS	79,60	09882016			108 31
24	000000504	SAAB FRANCE	19	19	5006	-1	ATIONNEME	PARIS		09882016			108 31
25	TOTAL								1097,70				
26													

Excel

Challenge of Language



C. 35 billion euros (i.e.)

70% of IPD French database for offices in 2018

Other issues

Updates

- ✓ Ratings are updated a minima on a yearly basis
- ✓ Updates also in response to events with the property (CAPEX, etc.)
- what process should be in place so that 1) we are alerted, and 2) that a description is provided to RQR?

Outputs

- ✓ Should the outputs be delivered on a portal
- ✓ Should the outputs be delivered directly into the clients' asset management system

Disclaimer

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