

### Methodology of reduction of uncertainties - Application to claims management in construction project

Bolifraud Sylvain, Julie Stal-Le Cardinal

### ▶ To cite this version:

Bolifraud Sylvain, Julie Stal-Le Cardinal. Methodology of reduction of uncertainties - Application to claims management in construction project. Journée de l'Ecole Doctorale Interfaces, Dec 2018, Palaiseau, France. hal-01989045

### HAL Id: hal-01989045 https://hal.science/hal-01989045v1

Submitted on 22 Jan 2019

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.





# **BOLIFRAUD Sylvain (PhD Student) LE CARDINAL Julie (PhD Director)**

Laboratoire Génie Industriel, CentraleSupélec Gif-sur-Yvette, France Contact : sb@leynaud-associes.fr

**OWNER** 

# METHODOLOGY OF REDUCTION OF UNCERTAINTIES – APPLICATION TO CLAIMS MANAGEMENT IN CONSTRUCTION PROJECT

### Claim definition

A construction claim arises when a party to a construction contract believes that in some way, by act or omission, the other party has not fulfilled its part of the bargain. (Tadayon 2012)



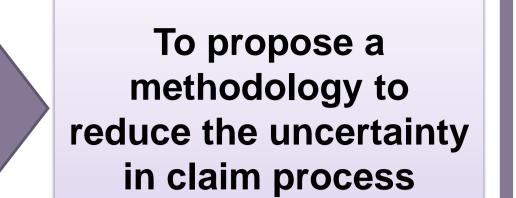
### Context of Construction projects & Research objectives

LOW PROFITABILITY INDUSTRY (net margins, about 3% of the turnover)

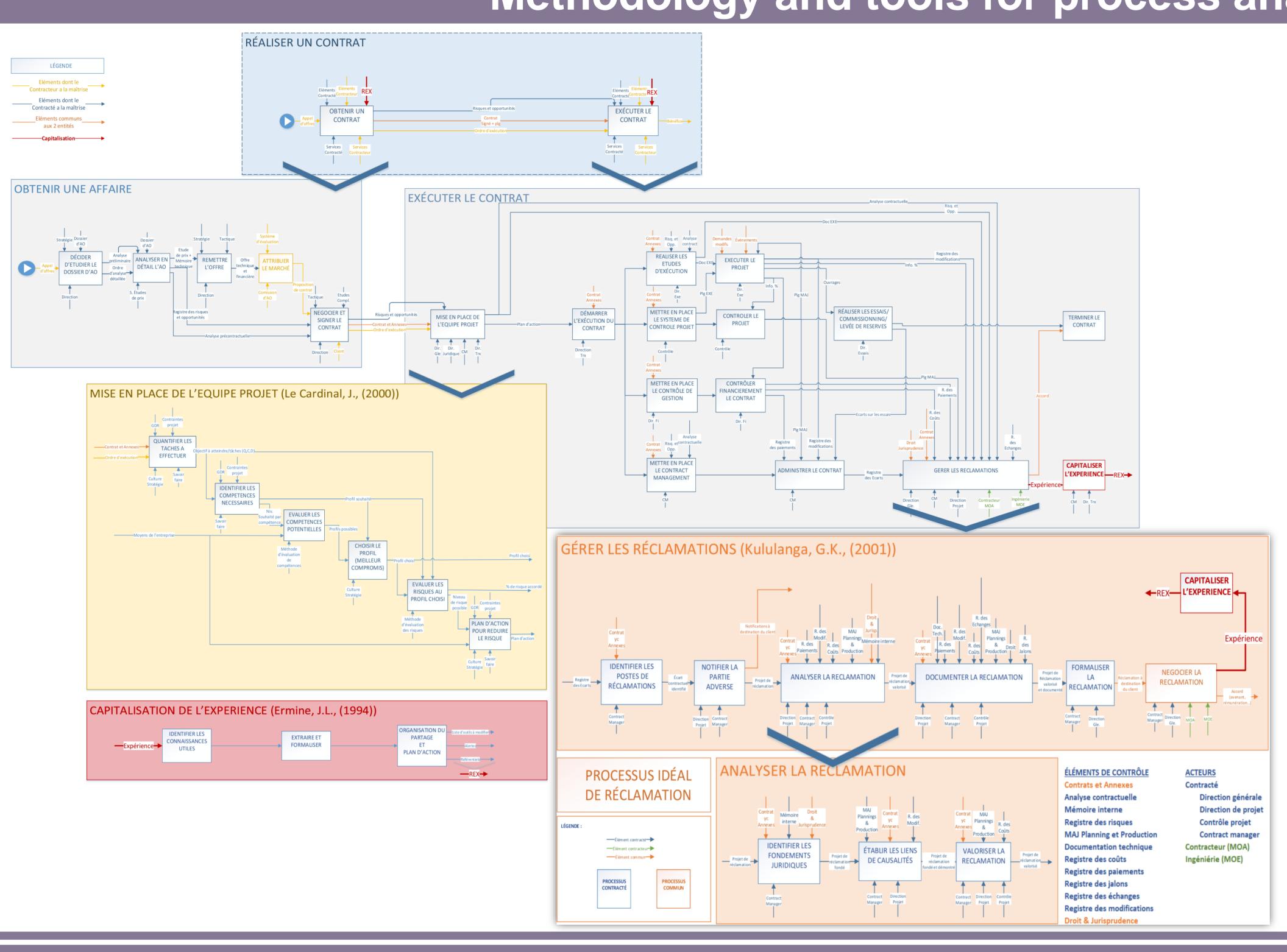
HIGHLY CLAIMS SENSITIVE
(5 to 50% of the turnover on a given project)

**CLAIM RESULT IS VERY UNCERTAIN** 

Around 20% of turnover is subject to uncertainty (expert estimation)



### Methodology and tools for process analysis



### 

# Findings

- Claim processes are known
- Claim process has very strong link to the project production processes and it can't stand alone
- Project management is at different level of maturity
- Quality of claim assessment is linked to three main aspects:
  - Actors' perception of the relation
  - Maturity of claim processes
  - A lack of capitalization of experience

## Methodology for analyse actors's perception of relation (Use of FAcT Miror)

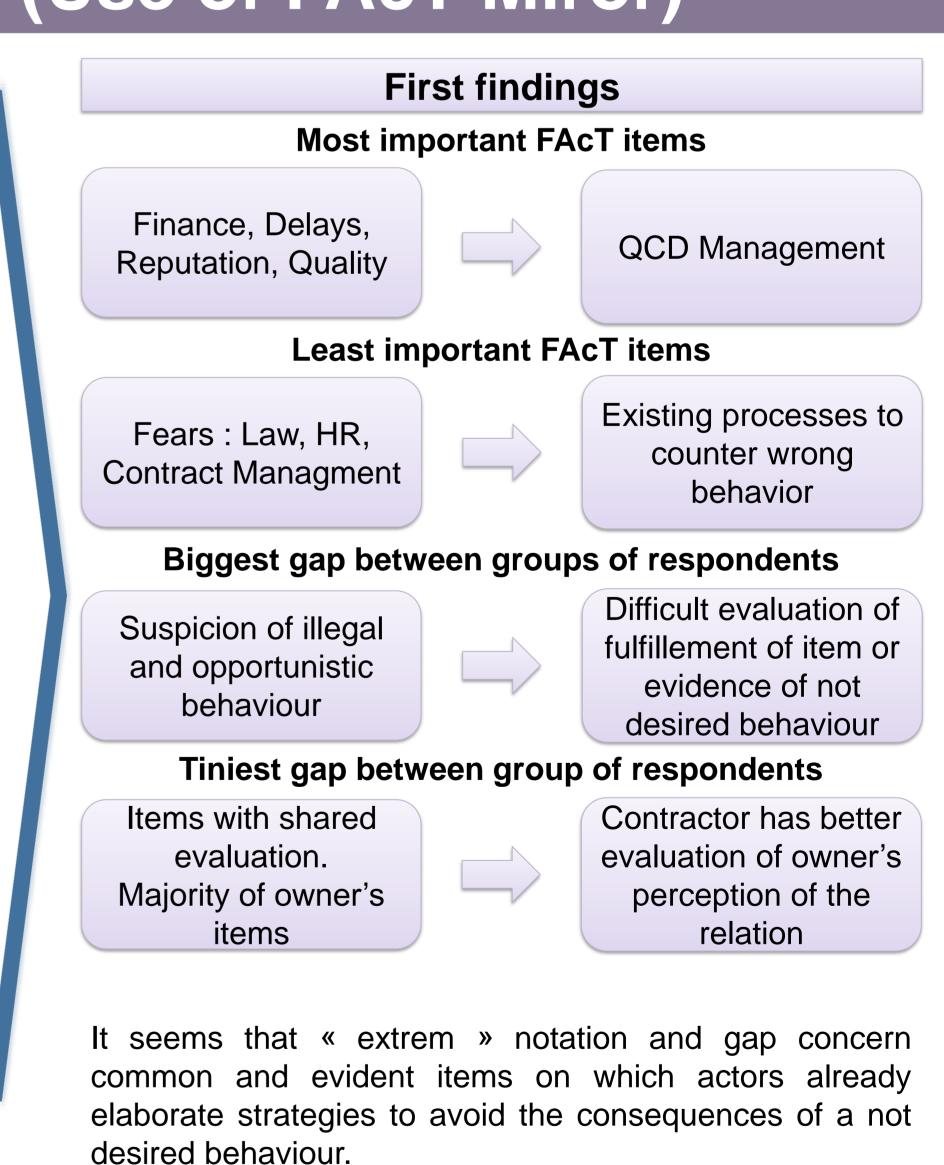
professionnals of the sector (Answer rate 27%).

**Evaluation of the importance of FAcT** 

Realization of a survey, in the form of a questionnaire sent to 167

### **FAcT Miror (Le Cardinal, G.) Method** FAcT Miror method allows to study the relation among actors of a projet basing the analysis on Fears, Attractiveness and Tempations to treason of the actors. Recommendation Action Analysis Management Risk management Precaution Objective Objective Means and strategy **Attractivenes** management Value Temptation — Guidances Ethics management Unavoidable thematic Action axis Action plan **FAcT List** Littérature review + 15 years of professional First draft of the list of FAcT experience Interview of 10 professionals in construction Completeness of the list of FAcT management Interview of 3 very high level professionals in Validation of the list construction management List of FAcT

# Synthesis of results - Classification in unavoidable thematics and in two groups Owner and Contractor - Distribution of FAcT along two axis « Gap in notation between group of respondents » and « Average importance given » - TIMANCE - TIME - OCHRECT - TIME - OCHRECT - CLOWN - HUMANN - LAW - HUMANN - HUMANN



### Références

- Brunet, A., César, F., (2014), Le contract management, Eyrolles, Gestion de projet.
- Le Cardinal, G. (2014), Construire la confiance de l'utopie à la réalité La PAT-Miroir Attitude, Presses universitaires de Sainte Gemme.
- Pluchart, J.J., & Al.(2016), Master management des grands projets, MA Editions, Master.
- Rabbe, M. (2002, *Manuel de management de projet*, Presses Ponts et Chaussées.
- Zack, J., (1993). "CLAIMSMANSHIP": Current Perspective. *Journal Construction Engineer Management 119*, 480-497.
- Kululanga, G.K. & Al. (2001). Construction Contractor's Claim Process Framework. Journal of Construction Engineering and Management. Vol. 127. N°4. p. 309-314.

### **Futur works**

- To Link FAcT items to processes which are source of:
  - Claims
  - Evidence for claims
- To Analyse results in regards with existing literature
- To Elaborate a methodology to reduce claims uncertainties