Escape of water

The Insurance Institute of Manchester

Sean Nolan, ACII, Dip CILA, BDMA Ins Tech

Head of Escape of Water, General Property

Crawford®

Objectives for the session

1. Understand what is driving increase in Escape of Water claim costs
2. Understand what can be influenced at a claim level
3. Identify strategies to reduce claim costs
4. Consider how data analysis might influence decision making
5. Consider long term solutions to the challenge, including technology

Escape of water in the UK market – the cost!

£2.5m

paid by insurers every day

21%

of domestic property claims

£654m

total cost of escape of water

31%

increase in last three years

Not just a UK issue, USA market

14,000 

People in the U.S. experience a water damage emergency at home or work each day

98% 

Of basements in the U.S. will experience some type of water damage during their lifespans

37% 

Of U.S. homeowners reported to have suffered losses from water damage

$6,965 

The average costs of a home water damage insurance claim

$2.5BN

The annual costs to insurance companies from water damage in the U.S.

Water loss

We reviewed four root causes responsible for water loss.

Mechanical damage

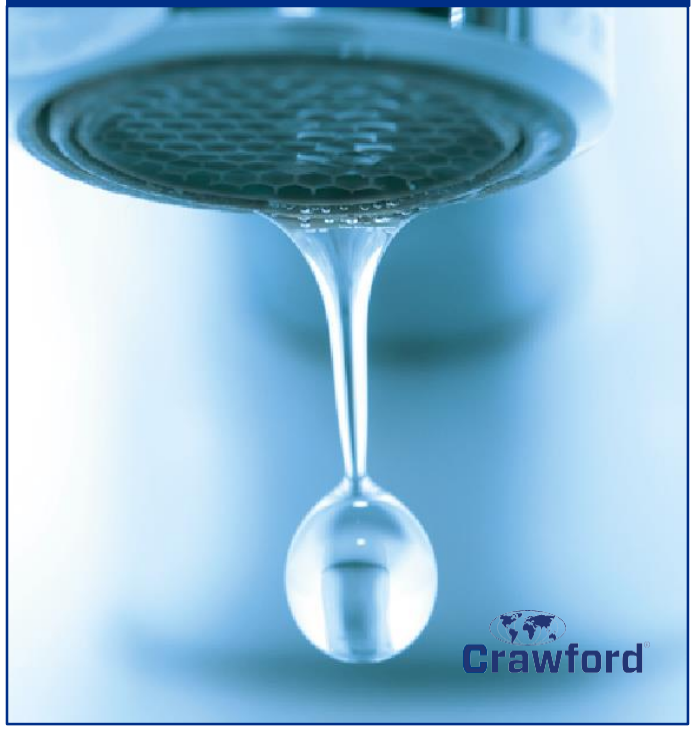
Freezing/bursting

Corrosion

Overflow/backup

Key aspects isolated and extrapolated

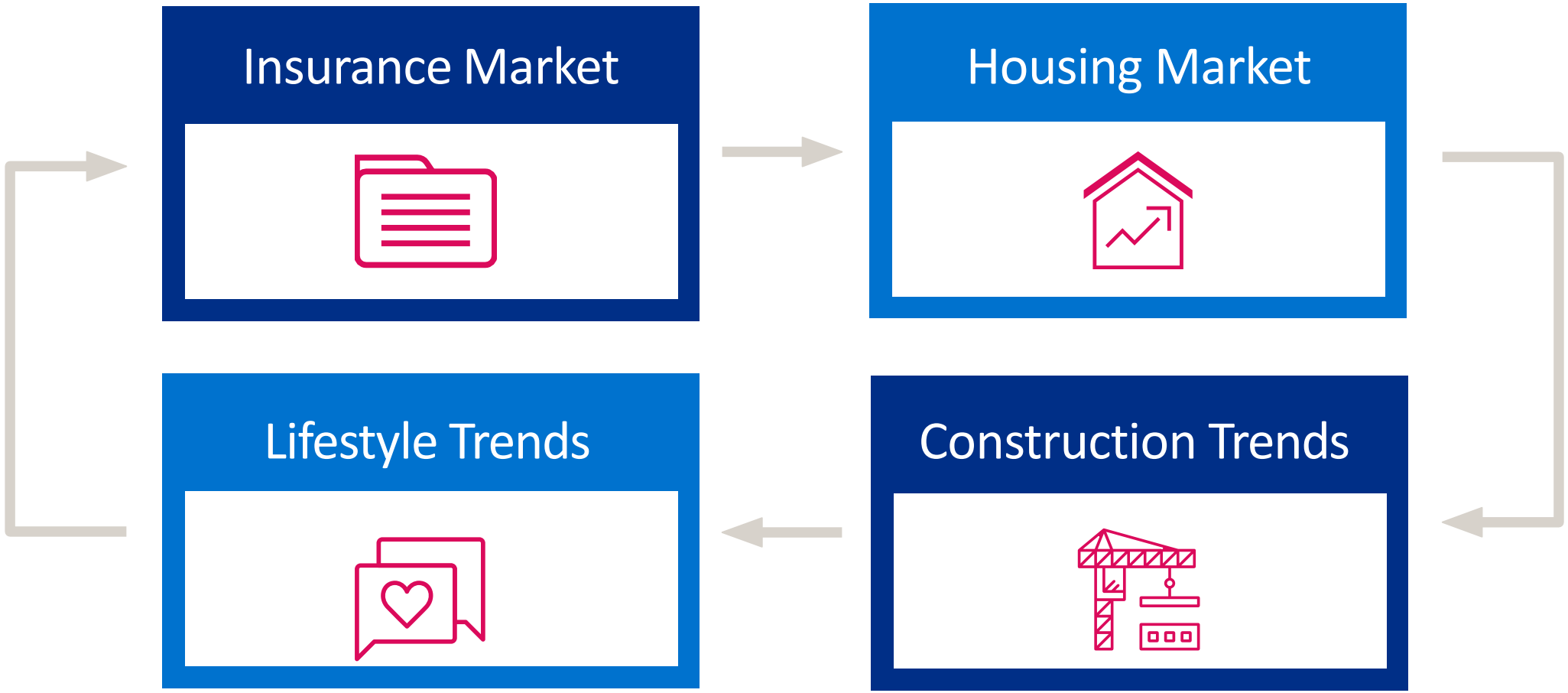
Escape of water:
The number one priority



Key aspects of the Crawford Escape of Water dataset were isolated and trends extrapolated to deepen our understanding of the drivers of rising cost:

- Type of property - detached / semi-detached / terrace / flat +which floor
- Age of property by banding - pre 1900-1930 / 1940-1970 / 1980 onwards
- Main construction of building
- Source of water - appliance/mains water/ sealant/ soil/ waste/ other
- Pipe material and connection type - plastic/ copper/ push fit etc
- Which floor of the building the leak originated from
- Type of water - clean - soil/ soil - waste/waste
- Number of rooms affected
- Type of rooms affected - i.e. Kitchen/ bathroom etc
- Value of damage to kitchens and method of settlement
- Alternative accommodation required
- Type of accommodation - alternative property/ hotel/ cash payment/ other combinations or solutions
- Disaster recovery required and if so its value and the method of drying used

Key factors increasing cost



Housing market

Housing stock

76% pre 1979

New Houses

98% report a defect

New Houses

25% 16 or more defects

New Houses

27% Timber Framed

Washing Machines

1970 = 65%
2011 = 97%

Dishwasher

1994 = 18%
2016 = 45%

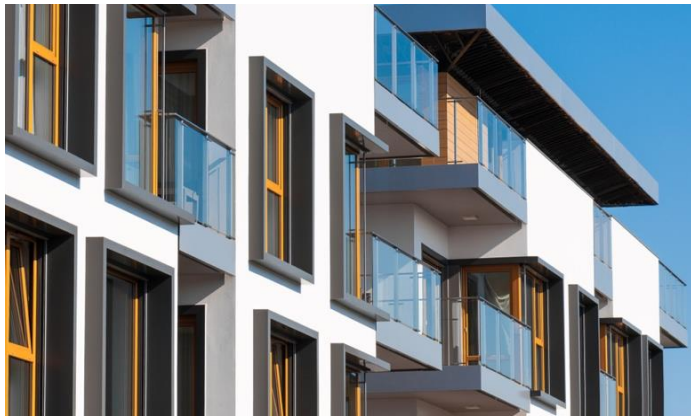
Central Heating

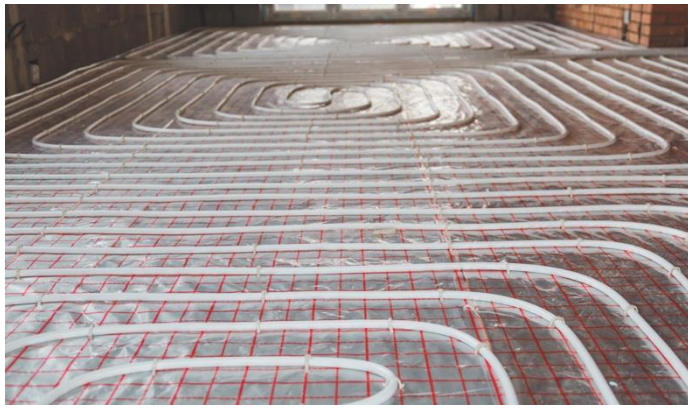
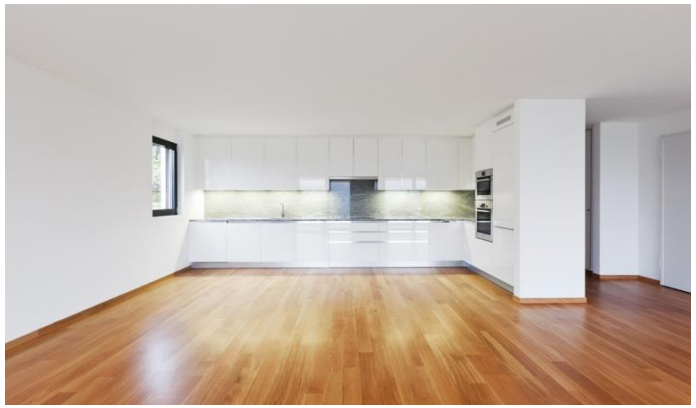
1970 = 30%
2016 = 95%

Growth in multi occupancy dwellings

Student Flats
Domestic Flats
Residential
Retirement & Care

Construction trends

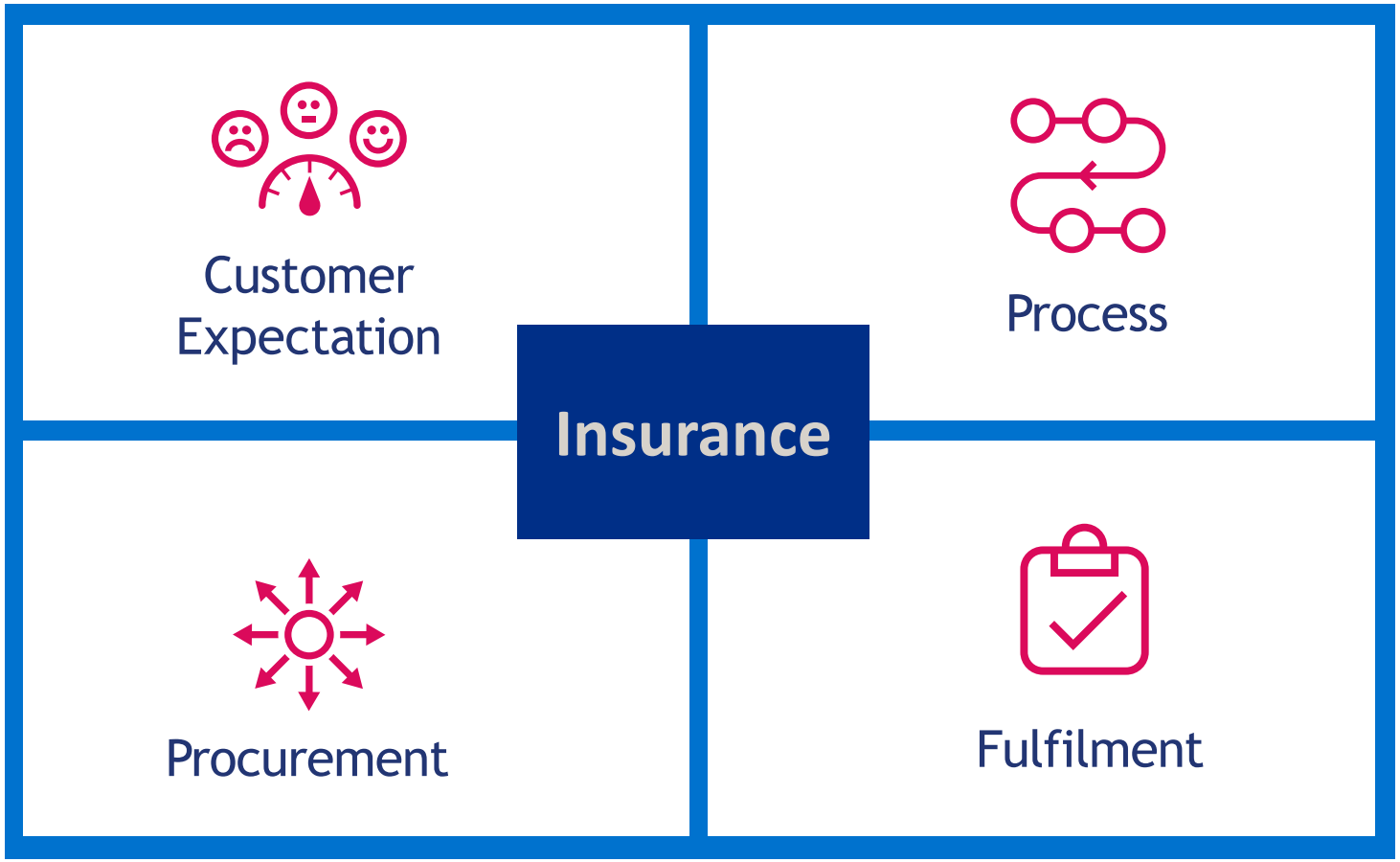




Lifestyle trends






Insurance sector trends



Focus on what we can influence

Able to Influence

- Procurement Strategy
- Loss Adjusting Process
- Recovery from Third Parties
- Fraud Identification
- Underwriting
- Customer Expectation Management
- Use of Technology

Limited Influence

- Housing Market
- Construction Practices
- Government Regulations
- Social and Lifestyle Trends

No single solution – several key factors

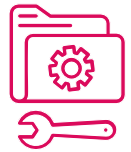
We understood the drivers and what makes a difference….

The right people with the right knowledge

Practical training program by national building contractor

Invest in the equipment

Rapid on-site response 24/7/365



Strict technical handling mandate

Target fraudulent / over stated claims

In-house drying experts for supplier challenge

Line-by-line scoping on claims by building surveyor

Recoveries

Continual monitoring of costs

The potential for damage if undetected. Volume and spread

Hidden pipework – water loss from pressurized pipes can cause extensive unseen damage

Diameter	Water loss in litres		Water loss in M^2	
	Per min	Per hour	Per day	Per annum
0.5mm	0.33	20	0.48	175
1.0mm	0.97	58	1.39	507
2.0mm	3.16	190	4.56	1,664
5.0mm	22.30	1,340	32	11,680

Hidden leaks – damage can be extensive if they remain undiscovered = Impacts reserve and drying time!

Drying techniques – how wet is wet?

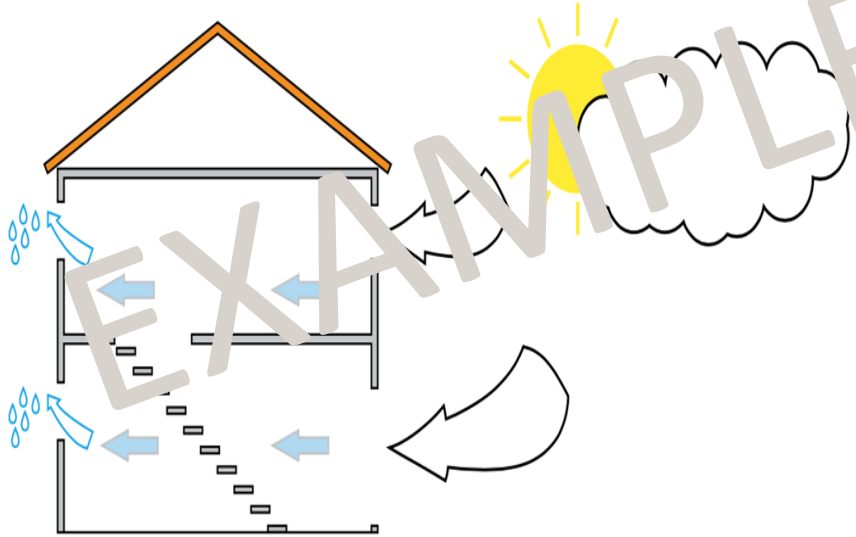
- Most materials absorb water except plastics and metals
- Some building materials will never respond to drying i.e. chipboard and MDF
- Common building materials can become super saturated – see table

Material	Dry % moisture content	Saturated % moisture content
Generic machine made brick	1.04	16.84
'Hand thrown' brick	1.10	17.61
Lightweight concrete block	1.20	19.10
Medium weight concrete block	1.41	17.90
Dense concrete block	0.81	15.18
Stranlite block	1.21	19.53
Thermalite block	2.90	31.69
Sand cement screed	1.69	15.53

Drying techniques – open or closed?

Open drying system

Preferred for very old properties



Closed drying system

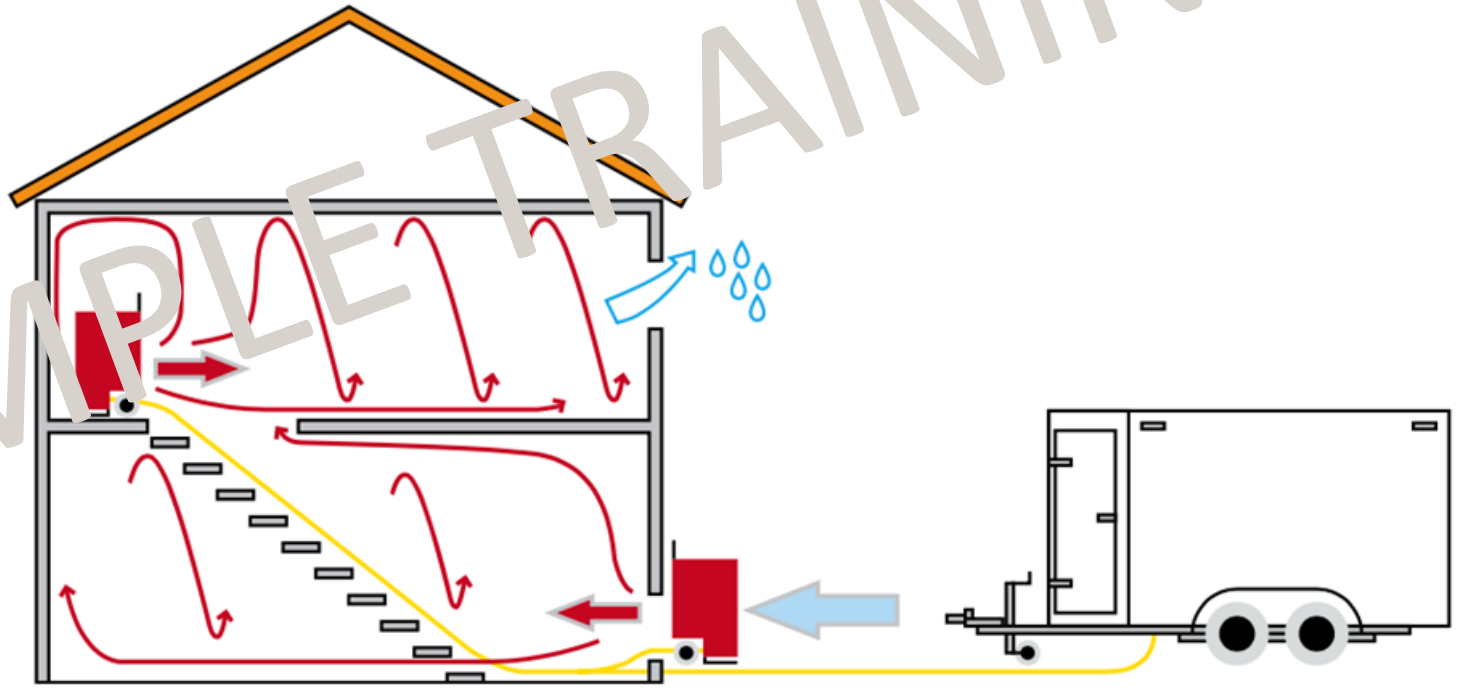
Using dehumidification, fans and heat

Increase evaporation rate at material surface to draw moisture from material

Drying techniques – ‘speed drying’

‘Direct’ air heaters
usually trailer systems where air is heated up to 70°C+ and ‘pumped’ into wet building

’Indirect’ air heaters
air in building heated using either hot water filled heat exchangers, (using trailer mounted boiler)



Data analysis and influence decision making

Sources of data

Public data

Environment Agency, land registry, electoral role, Cenus, satellite and mapping, published etc

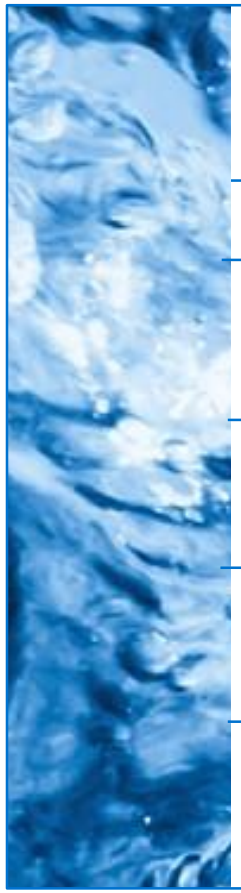
Claim related data

Age & type of property, construction, location, claim history, Cost by peril / location / type etc

Repair data

Line by line record of repairs across thousands of claims

Data – what can it tell us?



- Ownership & registered occupants
- Value at risk
- Local risk factors – flood risk, Age , construction type etc
- Likely costs associated source room
- Most expensive repair elements
- Source location and average costs

Top 10 skilled hours

High level category	Total
Decorating	6718
Flooring	3117
Plastering	2517
Kitchen	1270
Joinery	1078
Tiling	895
Bathroom	768
Protections	576
Electrical	453
Block & Brickwork	438

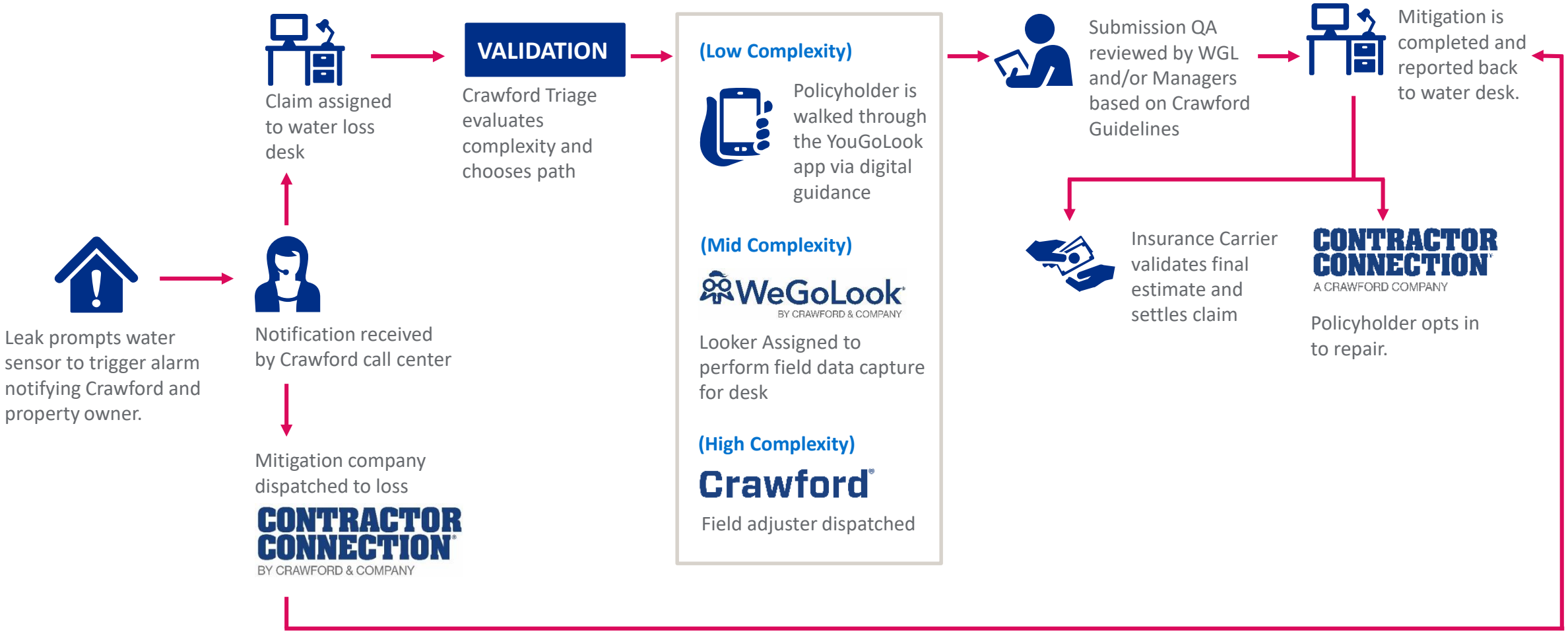
Top 10 material cost

High level category	Ranking
Flooring	1
Kitchen	2
Decorating	3
Plastering	4
Joinery	5
Roofing	6
Doors	7
Tiling	8
Block & Brickwork	9
Windows	10

Alternative solutions

Example workflow

Leveraging innovation and expertise to deliver seamless performance and desired outcome



The future

Connected homes/internet

Continued upward trend in value and quality of finishes

Increased homeworking

Technology-enabled claims solutions

Amazon, Google and other disruptors

Changes to building regulations

Brexit: Labour force dynamics driving increased cost

Any questions?

www.crawco.co.uk