Work Flow & Automation in Fibre Optics

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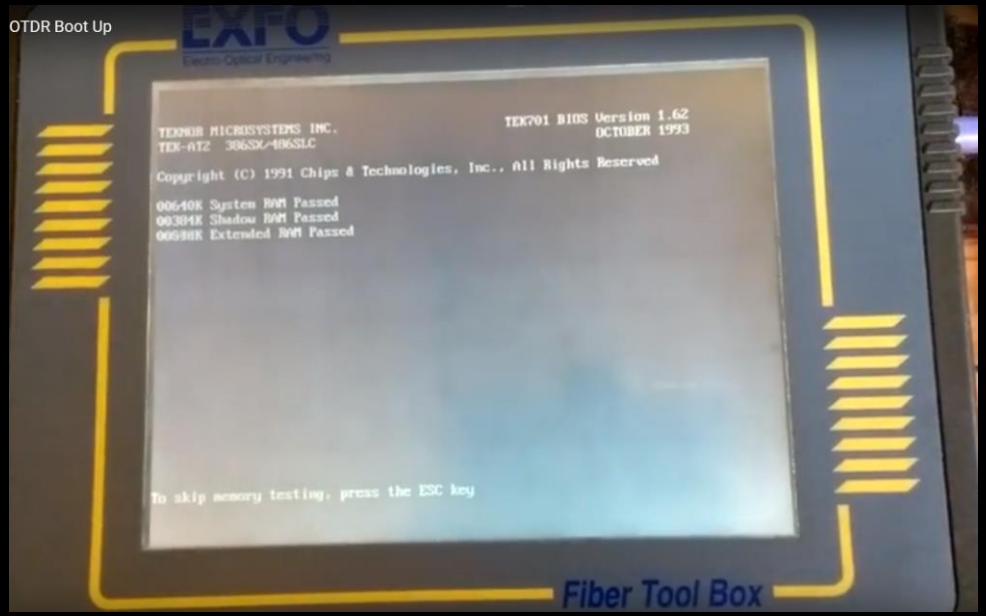
AE Bureau

July 24, 2019

The good old days…

New fibre deployment MCI in Mexico



OTDR characterisation

The good old days…

ISO operations certified!!

Documenting field work:
-Manual time consuming tasks
-abc
-Paper reports of OTDR traces
-and more

FTTH deployments western Europe

2009 – Portugal
2010 – Andorra
2013 – Spain
2015 – France
2017 – Italy
2018 – UK

Documenting field work:
-Manual time consuming tasks
-abc
-OTDR traces, Yes / No, perhaps…
-and more

Our industry is transforming . . .

Intelligence

Fiber

High-speed

Cloud

Analytics

Check 5G Coverage

Check 5G coverage for our UK launch cities below:

- Belfast
- Birmingham
- Cardiff
- Edinburgh
- London
- Manchester

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Asking more from FO networks

Fiber rollouts

Network densification

End-to-end visibility

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. . . and facing more and more challenges

Service issues

Delays

Cost overruns

Reputation damage Subscriber churn

Compliance issues

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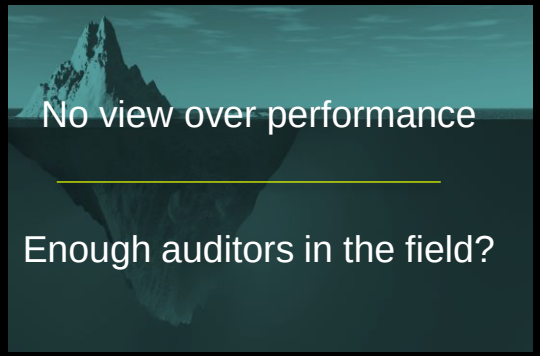
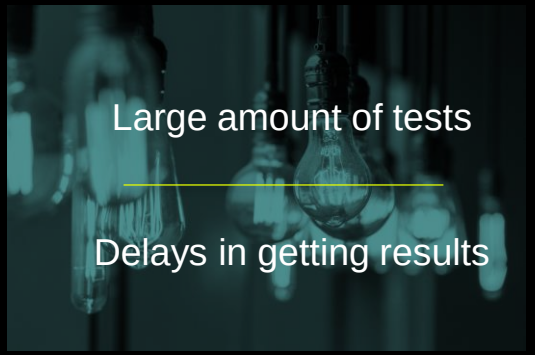
Today, issues faced by Operators and Network Carriers

Compliance

Visibility



Volume



… lack of visibility over results impacts the quality of business decisions

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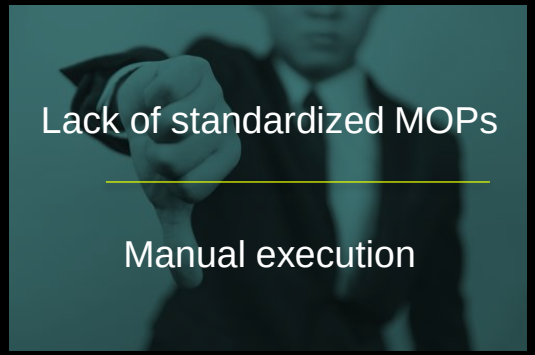
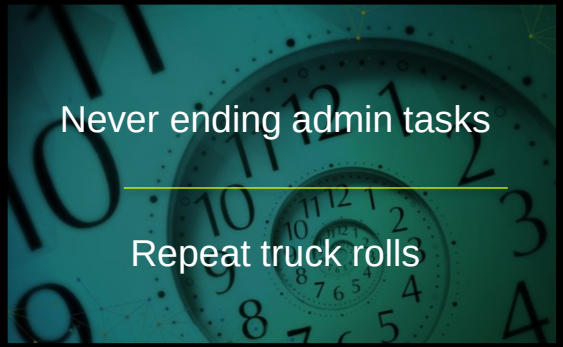
Today, problems faced by contractors…

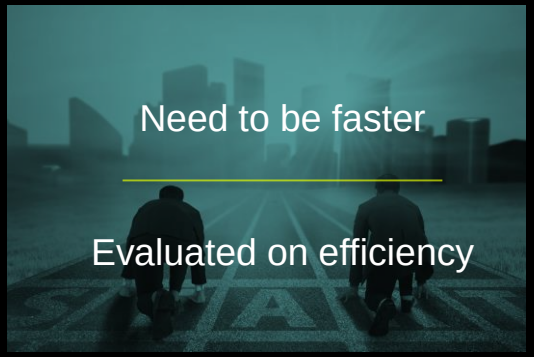
Quality



Time



Competition



… if testing is not done the first time right, contractors return on their own expense

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What if…

Reduce operational costs

- ✓ Adhere to testing Best Practices
- ✓ Reduce field and project management testing validation

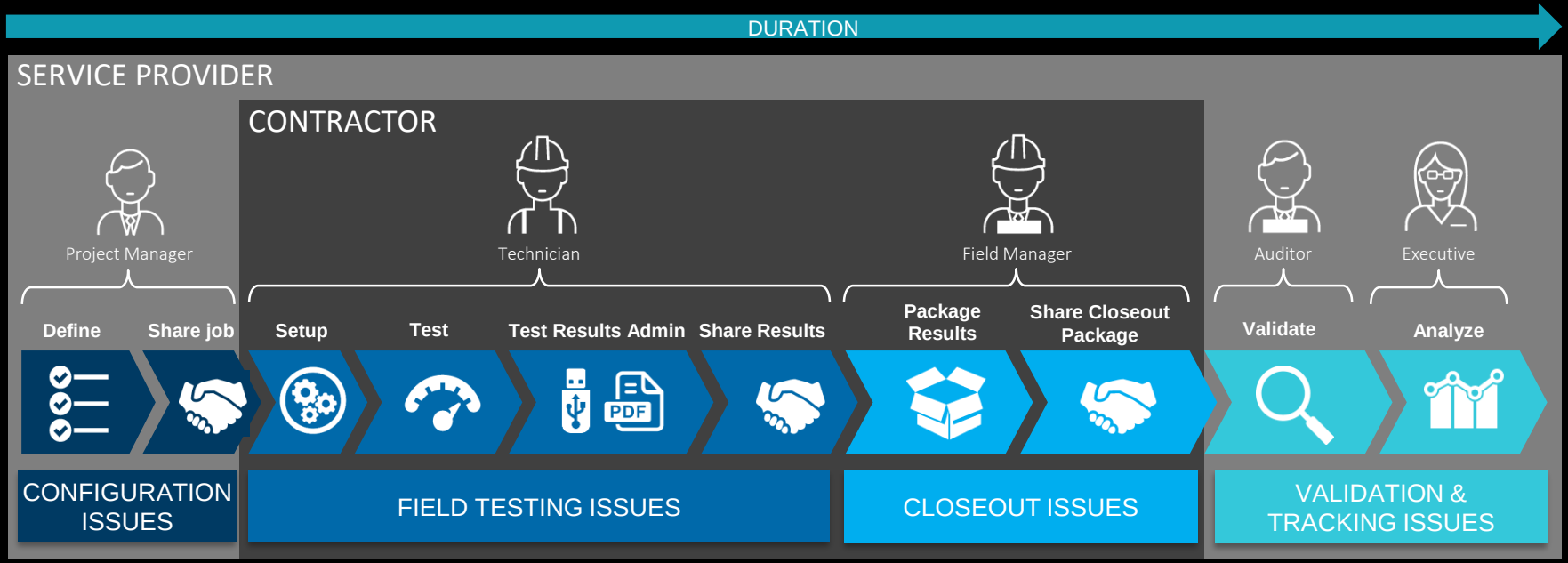
Time savings

- ✓ Hassle-free job definition –
- ✓ Built-in test validation streamlines closeouts quickly

Improve business decision

- ✓ 100% confidence that the job is done first time right
- ✓ Get paid faster

Today's Field Testing practices



- 50+ page process docs
- Job info
- Test configs

- Not following process
- Typos, missing data
- Wrong test config
- Managing test results

- Missing/wrong results
- Repetitive, laborious
- Customized reports

- Missing/wrong results
- Repetitive, laborious
- Lack of visibility, insights

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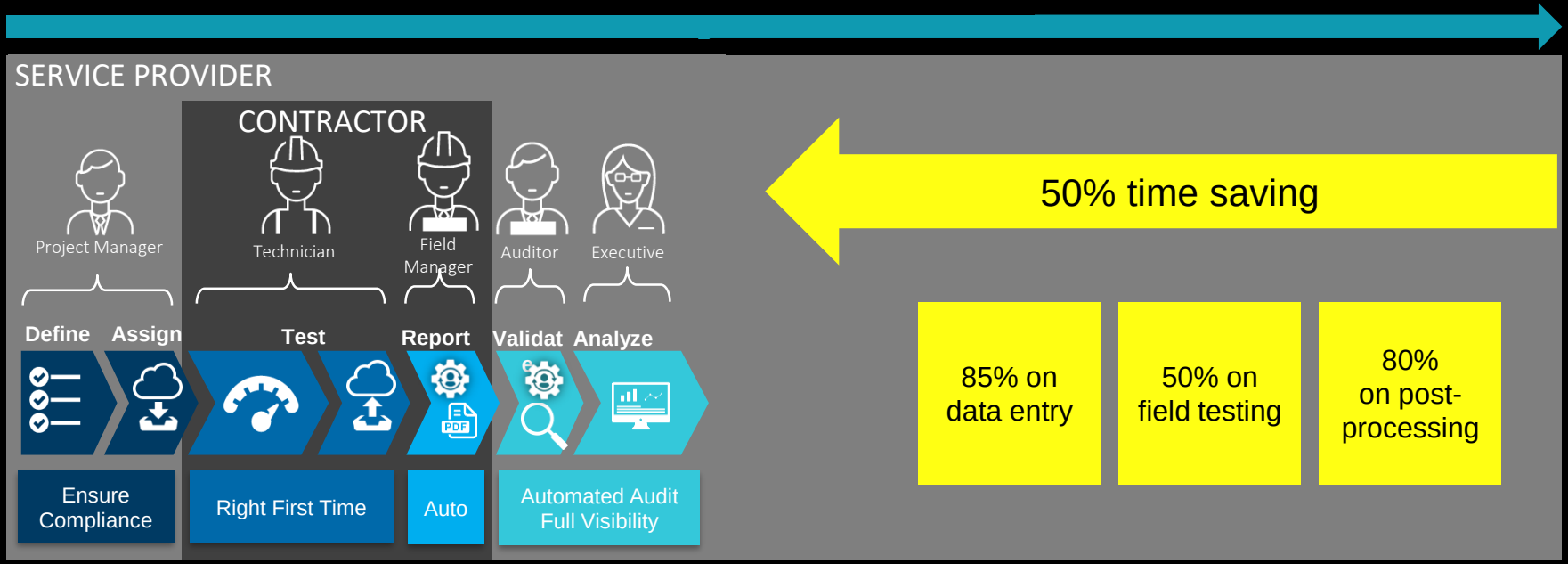
Smart Field Testing Approach. Work Flow Automation!!!



50% time saving

85% on data entry

50% on field testing

80% on post-processing

Simple Job Creation

Standardized Testing

Automated uploads

Real-time visibility

Valuable insights

…from weeks to minutes

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Work Flow & Automation in Fibre Optics

You can’t fix what you can’t see

Reliable test results

Real-time sync and validation

More projects and accelerated time to revenue

Automated & Customizable Analytics

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Easy close out work flow package

- ✓ Batch processing
- ✓ Analyze measurements
- ✓ Duplicated files detection
- ✓ Auto-validation

- ✓ Documentation
- ✓ Combine different types of jobs
- ✓ Validate compliance
- ✓ Generate report

Automated test results acceptance process for faster test Acceptance

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Analytics. Insights on Network Health

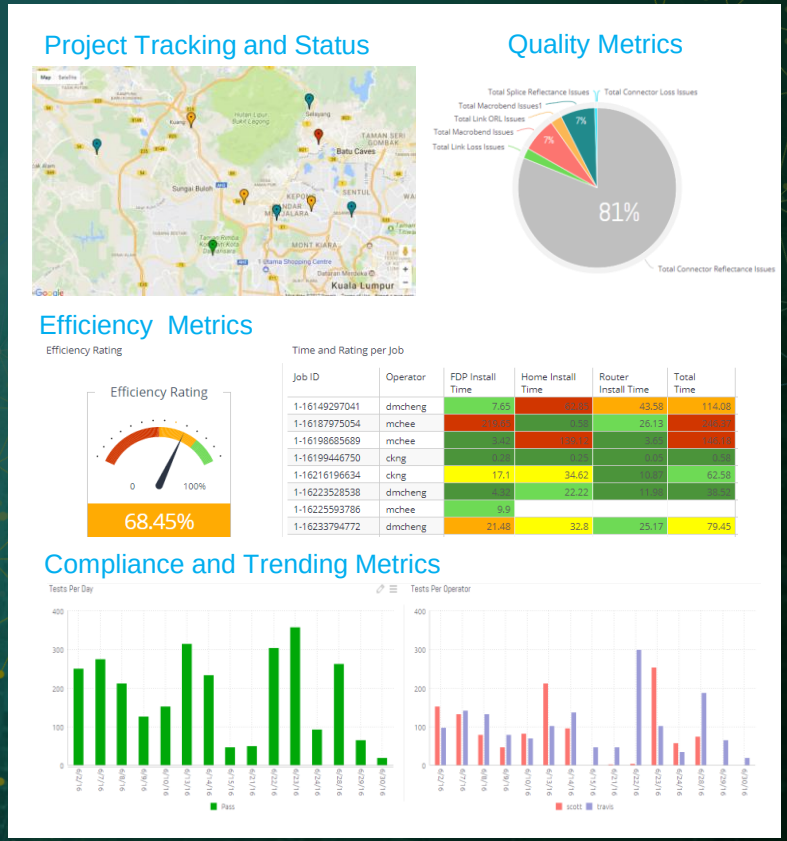
Unique insights

Immediate visibility

Standardize process

Improve process

- ✓ Data crunching on KPIs
- ✓ Automated results upload
- ✓ Automated results processing & aggregation
- ✓ Quality and compliance metrics highlight areas to fix
- ✓ Progress and efficiency metrics highlight areas to improve



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FTTH deployment by Tier 1 Carrier

Challenge

- Each Project took over 5 days to close out
- Lots of human intervention required
- Lots of doubt and finger pointing
- Unreliable results

Solution

- TestFlow reduces project test validation time to 2.5 days
- 100% first-time-right
- Complete confidence
- Immediate access to results

Benefits

- Reduces time to close out project from 5 to 2.5 days: 50% reduction
- Removed all the tedious steps of testing validation
- Increase in SLA compliance
- Clear identification of problems

3000 projects/year x 2.5 days savings/project = 7500 man days SAVINGS/year

Over $1.5 Million/year* in savings identified

*Based on EXFO's estimated calculation. End numbers were not provided by the carrier.

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Thank you

EXFO

1. Project Manager

Create — Accurate Data Entry

Define — Enforce pass/fail thresholds

Assign — Real time, Controlled & flexible

TestFlow Benefits

- ✓ Clear pre-established job definitions (job info, fiber ID creation, Project dates, Correct test configurations)
- ✓ Increase compliance & work quality
- ✓ Automated and quick visualization of job/site/project metrics
- ✓ Actionable insights into job progression, resource performance, compliance & quality
- ✓ Reduce test results admin (reporting, post-processing, auditing/validation
- ✓ User-based assignment and easy re-assignment
- ✓ Auto-sync with one or multiple technicians

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2. Field Technician

Access — Intuitive & fast

Perform — Error-free Manipulation

Upload results — Automated Reporting

TestFlow Benefits

- ✓ Seamless test app integration
- ✓ Significantly reduced test setup – no time wasted documenting, entering data
- ✓ Step-by-step guidance with test sequencing applicable to multiple technologies
- ✓ Meet customer requirements based on job definition
- ✓ No delays waiting for results

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4. Site Lead, Field Manager

Comply — Meet customer requirements

Adapt — Customizable templates

Share — Immediate results

TestFlow Benefits

- ✓ Significantly reduce bookkeeping tasks for whole project
- ✓ Increase technician autonomy with predefined test configurations & sequencing
- ✓ Step-by-step guidance & view of overall job progress in real time
- ✓ Reduce repeat jobs
- ✓ Automated and customizable templates and post-processing flexibility
- ✓ Faster job completion for multi-technician jobs

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4. Test Result Auditor

Review — Reliable & compliant results

Adjust — Feedback sent in real-time

Accept — Validation done in minutes

TestFlow Benefits

- ✓ Automated and quick visualization of job/site/project metrics (missing and/or added test IDs, test thresholds/ standards, test config/parameters).
- ✓ Reliable from-the-start test results reduces validation time – less data to fix.
- ✓ Prioritization of assigned tasks for review
- ✓ Generates an error report and can send ‘Quick Fix’ indications to technicians while they are still on-site – no repeat truck rolls
- ✓ Reduce test auditing/validation from hours to minutes

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5. Operation Director/Executives

Analyze — Automated & Customizable updates

Assess — Complete dashboards for quick visualization

Decide — Informed decisions based on performance

TestFlow Benefits

- ✓ Automated and quick visualization of projects and overall deployment metrics
- ✓ Actionable insights into job progression, resource performance, compliance & quality
- ✓ Capacity to find and fix systemic deployment issues before they impact deployment
- ✓ OPEX savings through process optimization
- ✓ Informed business decisions about prime contractors & inventory vendors

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