ZynQ360

Large European Refinery

FULL SITE VISUALISATION | CASE STUDY

The Challenge

A client at a refinery and chemical plant had a collection of asset data that was siloed, unmanaged and sometimes difficult to access.

They identified the need for a scalable and sustainable solution where they could centralise, manage, and maintain historic and current data efficiently.

A digital solution that could support the MoC (Management of Change) process, providing robust operations planning and decision-making. Where their teams and approved vendors could easily access trusted, quality data within a simple to use platform.

The Solution

Using innovative capture technologies, ZynQ 360 created a sustainable digital twin of the entire facility delivered within our cloud based visualisation solution, ZynQ.

- ✓ **360° photography capture**
- ✓ **360° drone capture -** *(aerial imagery /detailed ortho maps/3D mesh models)*
- ✓ **360° Pipe rack visualisation**
- ✓ **MoC feature development**
- ✓ **Quarterly MoC recaptures**
- ✓ **Focus Mode feature**
- ✓ **Asset plan creation**
- ✓ **Fire Zone overlays**
- ✓ **Bespoke training modules concept**
- ✓ **Bi-weekly meeting with asset product owner**
- ✓ **Upload of equipment register from SAP**
- ✓ **Two on-site training sessions completed**
- ✓ **Continuous on-site and VC training sessions**
- ✓ **On-site workshops and drop in sessions**
- ✓ **On-site usability surveys**
- ✓ **In-line training videos**
- ✓ **Dedicated ZynQ site expert**

The Results:

Proven by the Stats

According to survey feedback from ZynQ users:

- **5,978 hours** saved complex wide per month *(internal + external)*
- **5,238 hours** saved per month on average by internal end-users
- **740 hours** saved per month on average by external end-users

ASSET WIDE USAGE

1,139
ACTIVE USERS

HITS
696,415
SINCE INCEPTION

ESTIMATED REDUCED SITE HOURS ANNUALLY
48,852
HOURS

SITE ROLES INCLUDED:

- ✓ Engineering
- ✓ Technical
- ✓ Safety
- ✓ Training
- ✓ Maintenance
- ✓ Process
- ✓ Projects
- ✓ Turnaround

ANNUAL INVESTMENT
$765k*

ROI WITHIN
12 months

ESTIMATED ANNUAL SAVINGS
$4.9m
Based on $100 per hour (industry standard/average used)

*Initial capture cost and software licensing spread over a 3 year term

The Impact of ZynQ

Following a successful adoption and implementation of ZynQ, the team can perform the following tasks more efficiently, enhancing performance and continuously improving their operations.

With the trusted information they need at their fingertips they can collaborate in real-time, **reducing downtime, environmental impact** and most importantly, **improving safety on-site.**

Usage Stats

Results from usability tests and surveys

User numbers are based on survey responses within each department and are not representative of actual department numbers.

Maintenance

16 users

Hours saved per month: 115

Maintenance common uses:

- Turnaround preparation
- Measuring distances
- Location checks of equipment
- View equipment and check machinery equipment details
- Photos for job packs
- Exploration and planning

Engineering Services

21 users

Hours saved per month: 114

Engineering Services common uses:

- Inspect and review the situation in the relevant areas
- Piping and mechanical field check
- Verify and improve as built drawings in case of ambiguity
- Replacing site visits and enabling site familiarisation prior to visit
- High level risk assessments

Technical

15 users

Hours saved per month: 80

Technical common uses:

- View plot space for projects and plant changes
- Measuring distances
- To look up field situations and take “pictures” without going on site
- Check line-ups and location of instruments and equipment
- Pipe tracking

Usage Stats

Results from usability tests and surveys

User numbers are based on survey responses within each department and are not representative of actual department numbers.

Process

13 users

Hours saved per month: 41

Process common uses:

- ✓ Turnaround preparation
- ✓ To visualise the location without going to site
- ✓ Process planning and notifications
- ✓ Offers a lot of insight and helps in decision-making
- ✓ Remote training purposes

SSHE

10 users

Hours saved per month: 29

SSHE common uses:

- ✓ Insight into the situation in the field
- ✓ Allows users to better explain difficult to communicate on-site observations
- ✓ Dangers can be better mapped out - including rescue data sheets and TRAs
- ✓ Check on systems to be able to mitigate fire equipment
- ✓ Inspection tests and maintenance work

Projects

6 users

Hours saved per month: 19

Projects common uses:

- ✓ Plot plan checks during project development to determine location of new equipment/piping routes
- ✓ Check whether an existing structure is already equipped with fireproofing
- ✓ Site familiarisation to show site situation to remote engineers

Other

8 users

Hours saved per month: 13

Other common uses:

- ✓ Adding photos to work descriptions
- ✓ Conduct a site walk-through with someone who is not located on site
- ✓ Identify specific locations where work needs to be done as there's no need to go into the field and take pictures
- ✓ Equipment checks

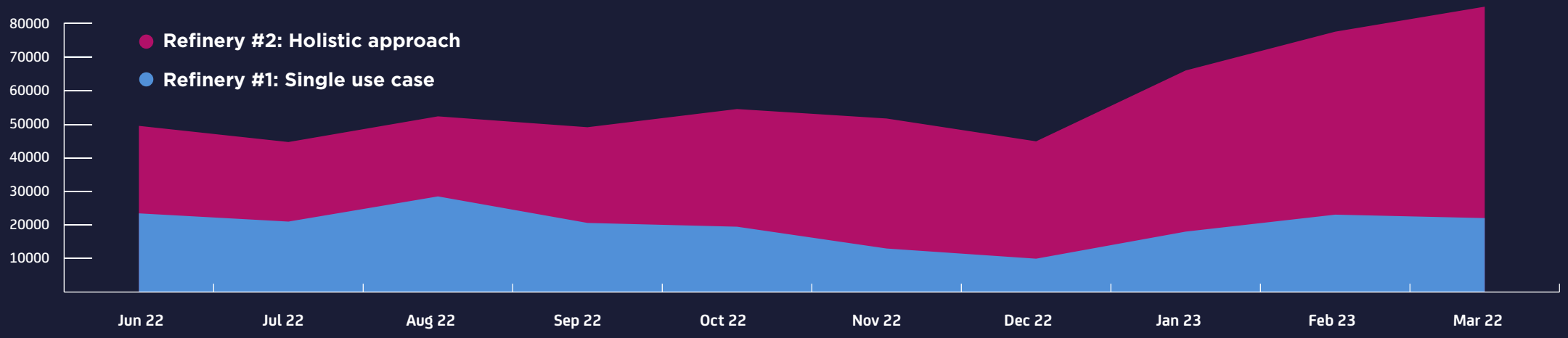
Single Use Case or Holistic Approach

Refinery #1:
Single use case

$1.6M
yearly savings

Refinery #2:
Holistic approach

$4.9M
yearly savings



Usage and savings are based on assets of a comparable size

“We use the ZynQ tool on a daily basis.

It shows there are many different use cases that make our lives easier and enable us to work more effectively.

Project Manager of Europe’s second largest refinery

“I save around 40 hours a month since the team implemented ZynQ.

I’m able to efficiently plan turnarounds and create work packs from my desk, drastically reducing the number of trips to site.

It has streamlined our operations and reduces the risk of potential safety hazards.”

ZynQ User | Maintenance Team at an International O&G provider

zynq

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Innovative Digital Solutions to Visualise your Asset

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