

#### INTELLIGENT RELIABILITY TECHNOLOGY™

#### DESIGN INTENT

Deriving component functionalities and key performance factors from system logic





A unique operating cycle connecting system and component intent

# ANALYTICAL DNA

#### DESIGN LIMIT NATURE OF FAILURE ACTUAL LIFE

Creating the analytical models to identify the key stresses and fix the product weaknesses in the early stages of development. The analytical limits lead to the type and location of instrumentation to set up and calibrate the DNA Generators



#### REAL-TIME DNA with **KXC DNA** GENERATORS<sup>™</sup>

Generating experimental DNA Maps All-in-One qualification solution accounting for all stress interactions to replicate the real world operating complexity



KXC maps the Product DNA for the development baseline, engineering changes, new suppliers, cost reduction initiatives and production parts to map the DNA Library. Field failures will be captured by the DNA Library to rapidly determine the root cause with a systematic and deterministic approach

## OUTPUT

SPECIFICATION LASTENHEFT (SOR) "Statement of Operational Requirements"

#### FACTORY ACCEPTANCE TEST PROTOCOLS

#### DESIGN RELIABILITY CRITERIA

LIFE EXPECTANCY OF CRITICAL COMPONENTS

LIFE EXPECTANCY OF THE SYSTEM





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## OUTPUT

KEY PERFORMANCE FACTORS (KPFs) Trending

OPERATING CYCLE INTERFACE PARAMETERS Monitoring

#### GAP TO FAILURE Analyzing

#### RESIDUAL LIFE Evaluating

# THE BIG PICTURE AND ACCURATE VIEW

Mapping



# DNA MAPPING TECHNOLOGY Advancing condition and time based monitoring systems

#### 1) SIMULTANEOUS CONTROLLING OF INTERFACE PARAMETERS TO GENERATE ALL STRESS INTERACTIONS

# 2) GENERATING ALL STRESS INTERACTIONS

TO REPLICATE FIELD CONDITIONS

#### 3) TRENDING AND ANALYSIS

OF PERFORMANCE AND STRESS PARAMETERS TO MAP THE PRODUCT DNA IN REAL-TIME

## **4) PREDICTING LIFE EXPECTANCY**

AN INTELLIGENT MAP OF DESIGN LIMIT, NATURE OF FAILURE AND ACTUAL LIFE (DNA)

#### **5) EVALUATING RESIDUAL LIFE**

CONTINUOUS TRENDING ANALYSIS OF THE FIELD DATA TO MAP THE PERFORMANCE DEGRADATION AND EXCESSIVE STRESS

