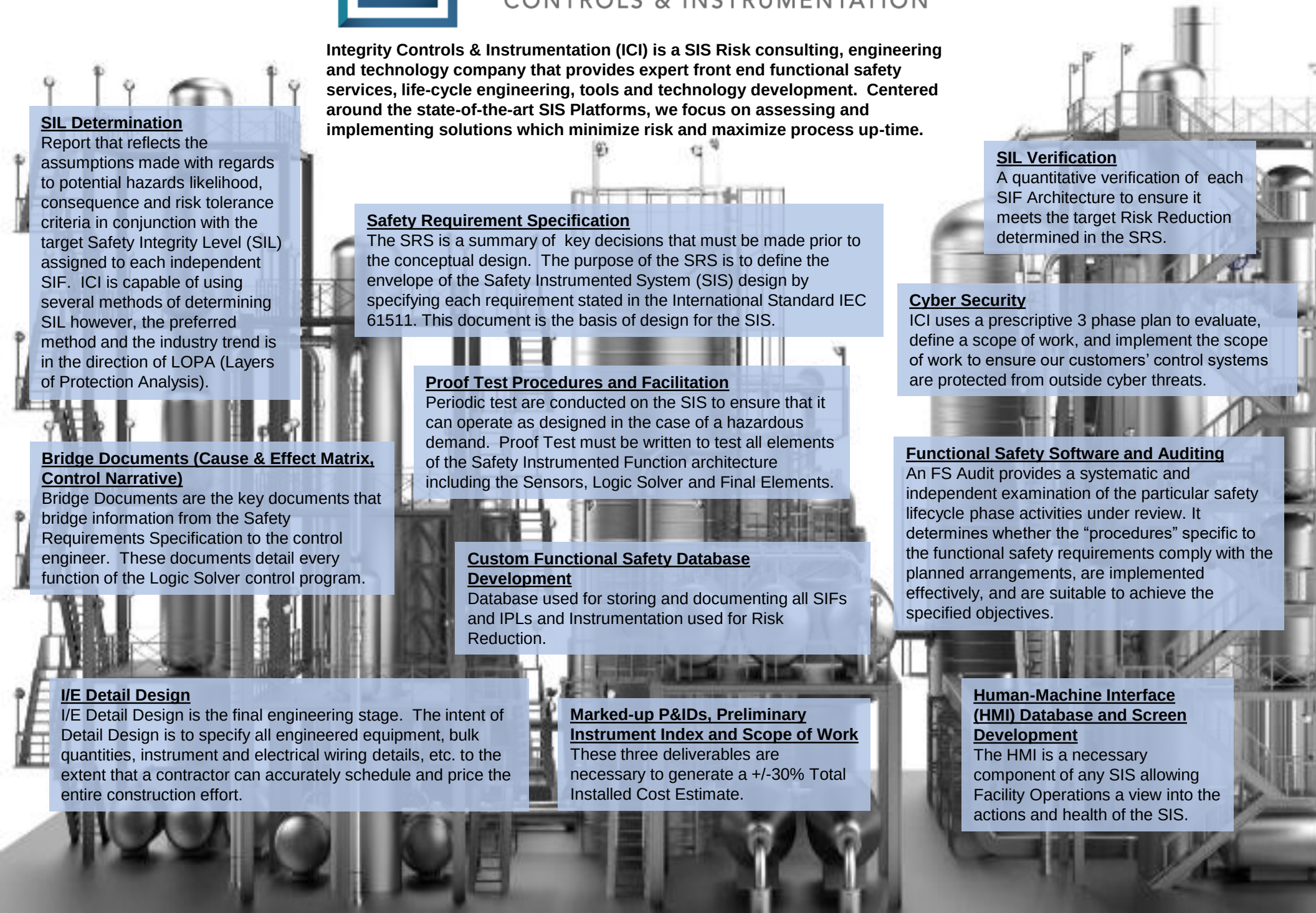
INTEGRITY
CONTROLS & INSTRUMENTATION

Integrity Controls & Instrumentation (ICI) is a SIS Risk consulting, engineering and technology company that provides expert front end functional safety services, life-cycle engineering, tools and technology development. Centered around the state-of-the-art SIS Platforms, we focus on assessing and implementing solutions which minimize risk and maximize process up-time.



SIL Determination
Report that reflects the assumptions made with regards to potential hazards likelihood, consequence and risk tolerance criteria in conjunction with the target Safety Integrity Level (SIL) assigned to each independent SIF. ICI is capable of using several methods of determining SIL however, the preferred method and the industry trend is in the direction of LOPA (Layers of Protection Analysis).

Safety Requirement Specification
The SRS is a summary of key decisions that must be made prior to the conceptual design. The purpose of the SRS is to define the envelope of the Safety Instrumented System (SIS) design by specifying each requirement stated in the International Standard IEC 61511. This document is the basis of design for the SIS.

SIL Verification
A quantitative verification of each SIF Architecture to ensure it meets the target Risk Reduction determined in the SRS.

Cyber Security
ICI uses a prescriptive 3 phase plan to evaluate, define a scope of work, and implement the scope of work to ensure our customers' control systems are protected from outside cyber threats.

Proof Test Procedures and Facilitation
Periodic test are conducted on the SIS to ensure that it can operate as designed in the case of a hazardous demand. Proof Test must be written to test all elements of the Safety Instrumented Function architecture including the Sensors, Logic Solver and Final Elements.

Bridge Documents (Cause & Effect Matrix, Control Narrative)
Bridge Documents are the key documents that bridge information from the Safety Requirements Specification to the control engineer. These documents detail every function of the Logic Solver control program.

Functional Safety Software and Auditing
An FS Audit provides a systematic and independent examination of the particular safety lifecycle phase activities under review. It determines whether the "procedures" specific to the functional safety requirements comply with the planned arrangements, are implemented effectively, and are suitable to achieve the specified objectives.

Custom Functional Safety Database Development
Database used for storing and documenting all SIFs and IPLs and Instrumentation used for Risk Reduction.

I/E Detail Design
I/E Detail Design is the final engineering stage. The intent of Detail Design is to specify all engineered equipment, bulk quantities, instrument and electrical wiring details, etc. to the extent that a contractor can accurately schedule and price the entire construction effort.

Marked-up P&IDs, Preliminary Instrument Index and Scope of Work
These three deliverables are necessary to generate a +/-30% Total Installed Cost Estimate.

Human-Machine Interface (HMI) Database and Screen Development
The HMI is a necessary component of any SIS allowing Facility Operations a view into the actions and health of the SIS.