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# FITI MISSION STATEMENT

**FITI's mission is to develop  
our clients' products through  
knowledge and technical expertise.**

*Our aim is to protect consumers as  
and their products by providing efficient  
speed, satisfaction, and sustainability.*



**and enhance the quality of  
gh industry specific  
xpertise.**

*well as the integrity of our clients  
ficient and accurate services with  
ility.*



# FITI CODE OF ETHICS



# FITI SERVICE CHARTER





FITI Code of Ethics  
guarantees that the full  
extent of our services are  
performed in compliance  
with the highest ethical  
standards.

The FITI Service Charter  
ensures that we provide  
our most convenient and  
reliable services in all critical  
sectors of the testing,  
inspection, certification, and  
R&D industries.



# HISTORY

FITI Testing & Research Institute was established in 1965 and is one of the largest nonprofit testing, inspection, certification, and R&D institute in the world. Considered one of the most innovative textile testing laboratories in the world, FITI services are now being used by more than 100 of the top global apparel brands and serves over 25,000 plus satisfied customers. FITI's organizational structure guarantees the most accurate results in technical integrity with regular internal and external correlation exercises including comparison testing with the AATCC ensuring results that are reproducible, traceable and up to the very highest quality standards.

1965  
Founded

1994

The 1st accredited testing lab by KOLAS

1996

Cooperative lab with Japan Spinners Inspecting Foundation (BOKEN)

1997

Accredited testing lab by Ministry of Construction & Transportation

Affiliated lab for Geosynthetic Institute in USA

1998

Assigned as the testing lab for Water Quality Analysis

Recognized as the “#1 Friendly Service Provider,” FITI understands the importance of fast and reliable quality testing and invests heavily in training our staff to ensure the best customer care and services. Our commitment to customer service is unparalleled in the industry and is most apparent through our highly flexible and dedicated team of professionals.

# 1974

Authorized lab by the Woolmark company

# 1983

Cooperative lab with Intertek

# 1986

Type Approval lab under Ship's Safety Law

Appointed as secretary organization for Intl. standardization Technical Committee 38(ISO TC38)

# 1988

Foreign Inspection Body for Japan Industrial Standard Mark (JIS Mark)

# 2001

Assigned Reliability Assessment Organization by Ministry of Commerce, Industry & Energy

# 2002

Cooperative lab with Yantai Entry-Exit Inspection & Quarantine Bureau of China

# 2004

Appointed as International Organization for Standardization Technical committee 221(ISO TC221) Secretary

Made the Mutual Co-operative Agreement with TRI in the USA

# 2006

Accredited testing lab by National Maritime Police Agency for analysis of maritime pollution

Appointed as a specialized Animal Fiber Testing Institute by CCMI, USA

# 2007

Accredited as the sole textile educational institute by AATCC

Made the Mutual Recognition Agreement on GB18401 with China Textile Academy (CTA)

# 2008

Accredited as a safety certification authority by the CPSC

Appointed as an Institute of Inspection for Textile Goods and Accessories by AEON, Japan's biggest retailer

# 2010

Global Testing Service set up in cooperation with FITI Associates, in China, India, Thailand, and Vietnam

# 2011

Global Testing Service Coverage expanded into Indonesia, wider parts of India

# 2012

Draft ISO 13029 officially adopted. Introduction of FITI T-Map Systems. 24-hour vendor-customer support

# ACCREDITATION GLOBAL PARTNER

FITI is one of the very few internationally approved institutions  
Private Accreditations

Accredited by Marks and Spencer and Decathlon via lab audit and/or correlation exercise

Accredited by Arcadia and Next via correlation exercise

Approved lab by leading retailers all around the world

Gap, Kohl's, Levi's, JAG, Forever21, PoloRalphLauren, Guess,  
American Apparel, Marks&Spencer, Next, Mango, Bhs, KappAhl, BeBe, Ergo Baby, etc.

Accreditation by Governments and Industry Associations

The 1st accredited testing lab by KOLAS

Assigned as a lab for testing rubber granules for artificial turf by Ministry of Education

Accredited testing lab by Ministry of Construction & Transportation

Assigned as a testing lab for Water Quality Measurement by Ministry of Environment

Assigned Reliability Assessment Organization by Ministry of Commerce, Industry & Energy

Accredited testing lab by National Maritime Police Agency for analysis of maritime pollution

Accredited as the sole textile educational institute by AATCC

Accredited as a safety certification authority

Type Approval lab under Ship's Safety Law

Accredited as a reliability assessment institute

Foreign Inspection Body for Japan Industrial Standard Mark (JIS Mark)



AATCC

ASTM

CPSC

FITI Korea

Korea Consumer

Ministry of Environm

Korean Intellectual Pro

Korea Air Cleaning Asso

Korea Accreditation System

KOLAS Korea Laboratory

Ministry of Trade, Industry and

Ministry of Land, Transport and

KSA



# NS ERS



## FITI Global Partners

China Inspection and Quarantine Bureau CIQ

China Textile Agency CTA

China Testing Lab Agency CEPREI

Japan Ministry of Economy Trade & Industry

Japan Consumer Science Lab Agency

Japan Testing Agency BOKEN

California Department of State

USA GeoSynthetic Institute

Instituto Nacional de Normalización Textil, A.C.

Russia Standard Testing Institute

Saudi Arabia Government

Texas Research Institute

Canada CTT Group

## Partners

Agency

ent

perty Office

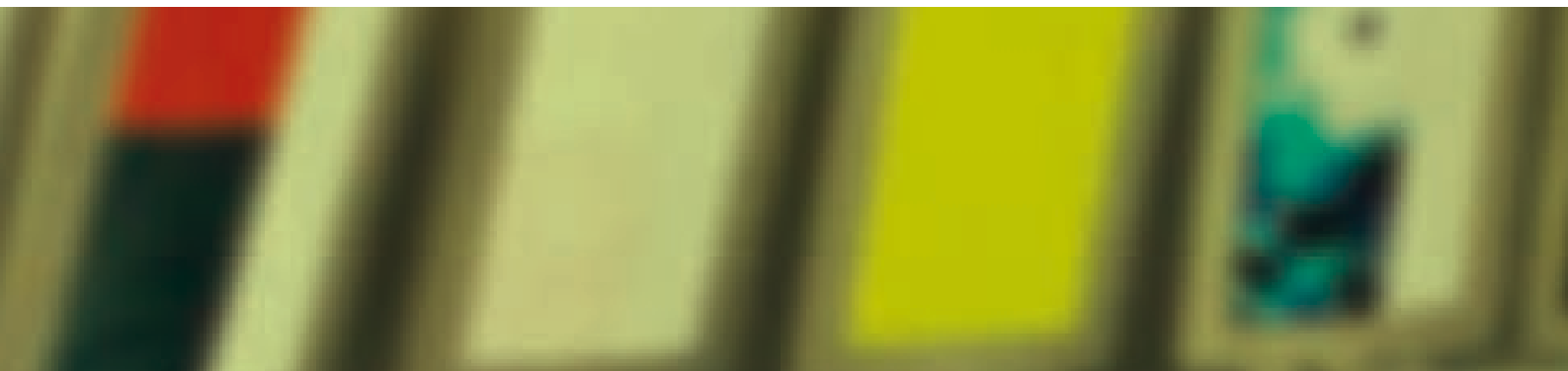
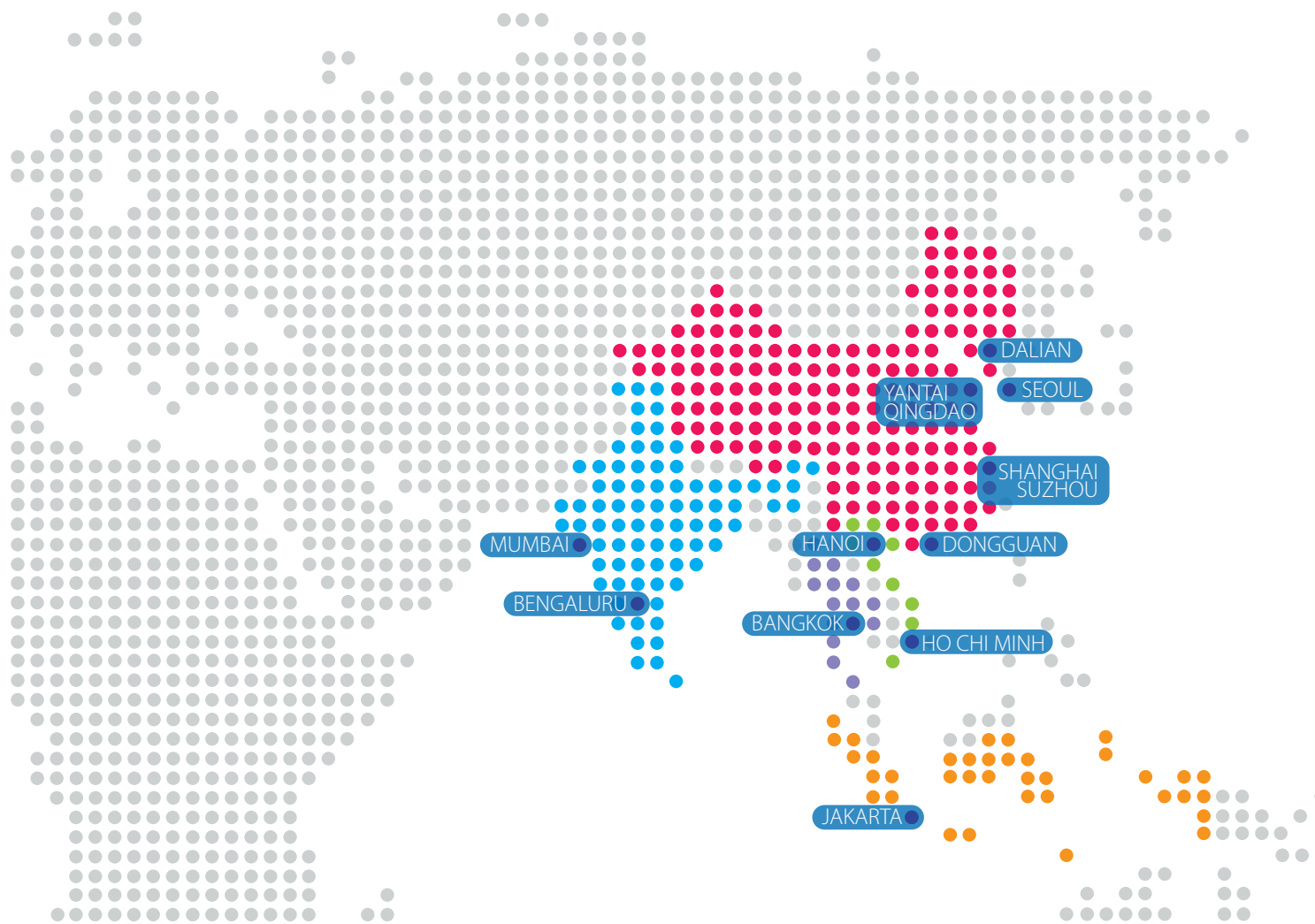
ciation

Accreditation Scheme

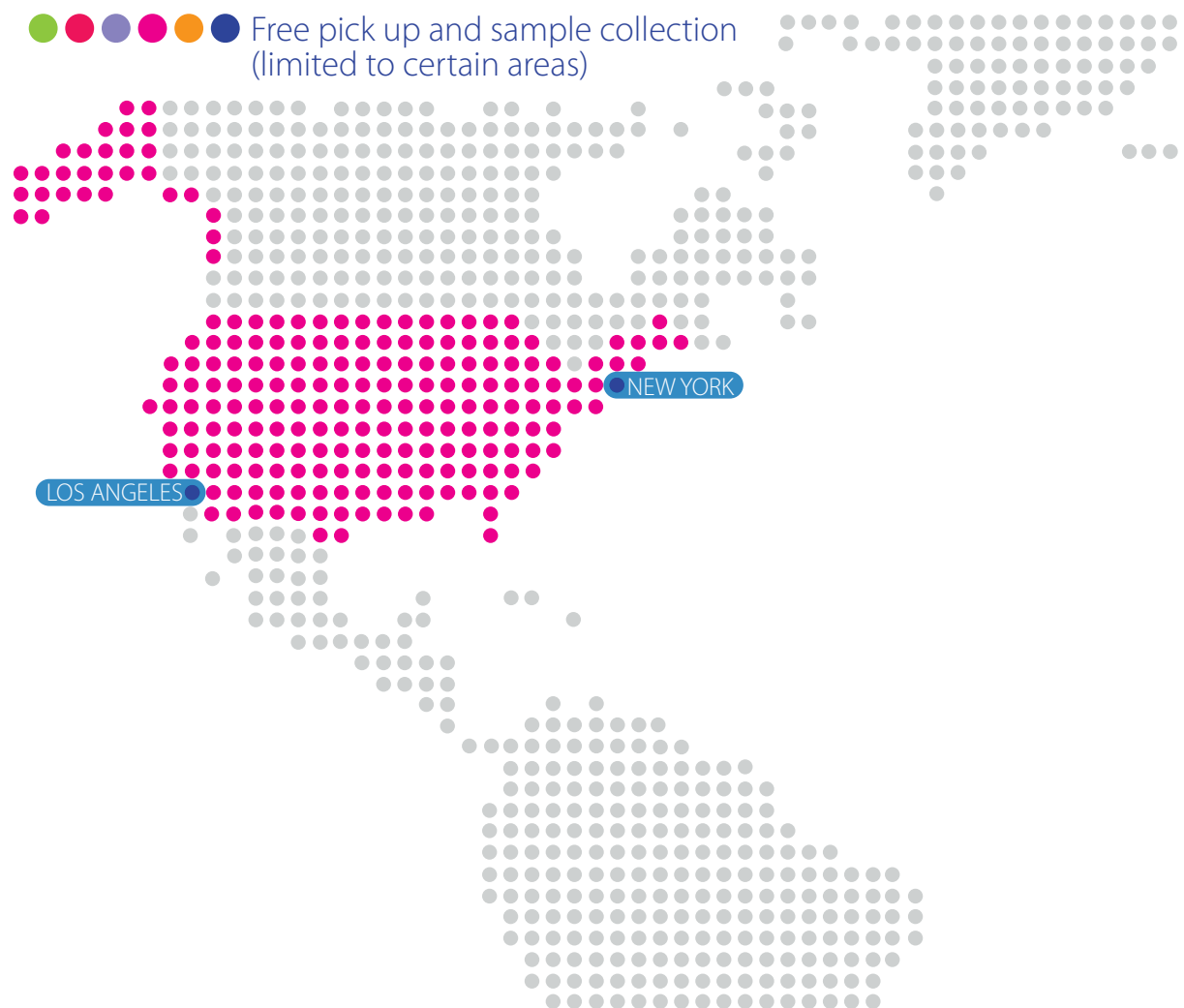
Energy

Maritime Affairs

# GLOBAL NETWORK



The FITI Global Network works closely with local regulatory authorities within developing consumer markets where safety regulations are being established or introduced. FITI is committed to providing exemplary services by providing regular training program, inter-laboratory correlation exercises, and special commitment from top management to ensure our customers' success in local markets.





# WHAT WE DO

INSPECTION  
AUDIT  
CERTIFICATION  
REGULATORY

SOFTLINE  
HARDLINE  
ANALYTICAL  
TECH TEXTILE  
FUNCTIONALITY



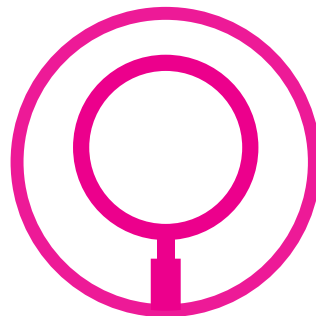
Softline  
Hardline



Inspection



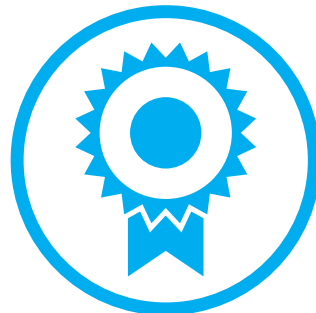
Analytical



Audit



Tech Textile



Certification



Functionality



Regulatory

# TEST SERVICE

## Quality Manual & Review

When it comes to a quality manual, the safety of both people and the environment comes first. The other priority is the quality assurance of products that are put out on the market. At FITI, these objectives are often encountered by the question: "How can we accommodate them while putting the least amount of financial burden?" The answer is drawn from an equation consisting of variables such as regulatory requirements, target quality, target market, product lines, manufacturing processes, and so on. FITI can happily write the safety and quality manual best suited for Customers' needs based on our thorough understanding of regulatory requirements and the accumulated experience as a quality assurance service provider. If there is a preexisting quality manual, we can provide complimentary review services in terms of changing regulatory requirements and Customers' increasingly demanding needs.

## Regulatory Update

Regulatory information will be updated to Customers and its suppliers biweekly via FITI Plus+, a designated team devoted to this mission. We believe that without daily monitoring, it would be extremely difficult to keep up with increasingly complicated regulatory requirements. Regulatory information is getting more and more important for retailers and their supply chain because they must manufacture products in compliance with changing regulatory requirements. It cannot be emphasized enough that failure of regulatory compliance by retailers and/or their suppliers will lead to devastating consequences, such as law suits and loss of confidence from customers.

## IT Support

FITI LIMS (Laboratory Information Management System) makes all information as diverse and specific as possible in order to meet various demands for statistical analysis on product quality and assessment of suppliers. Without a hitch, FITI data can be incorporated into Customers' IT system.

In addition, the newly developed FITI 'Bizconnect' is available as a customizing service for your benefit. With this service, you can access every test report from around the world simply by accessing our website. Furthermore, the communication channel for shipping, particularly in the case of failed test results, helps you and your suppliers get connected via web, 24 hours a day and 7 days a week irrespective of place. Test related statistical information can also be incorporated into this system upon analysis.

# TEST COST

As a non-profit institution, FITI Testing and Research Institute offers 5-30% discount compared to the industry average. Faster turn-around times further reduce costs by 8.5% for our valued customers.



# TEST SERVICES TURN AROUND TIME

FITi provides the fastest turnaround times in the industry with a standard of 3 working days. Our decades of quality expertise and supply chain innovations allow us to allocate our resources to provide quicker and more accurate results for all of our valued customers.

	TURNAROUND TIME	SURCHARGE
DAY OF ORDER	REGULAR (4 WORKING DAYS)	NONE
DAY OF ORDER	EXPRESS (3 WORKING DAYS)	40%
DAY OF ORDER	SHUTTLE (1 WORKING DAY)	100%
DAY OF ORDER	SAME DAY	150%



# SOFTLINE & HARDLINE

FITI's in-depth expertise, cutting-edge techniques and active participation in technical committees and standardization bodies both domestically and internationally have provided our customers with compelling and practical solutions in pursuit of total customer satisfaction.

## Physical Tests

All types of Color Fastness  
Dimensional Stability  
Spirality  
Visual Appearance  
Construction  
Yarn Count  
Weight  
Tensile Strength  
Tearing Strength  
Bursting Strength  
Seam Slippage  
Stretch and Recovery  
Pilling  
Abrasion  
Snagging  
Many more...


## Fiber Analysis

Flammability  
Animal Fiber Analysis  
Cashmere, Raccoon dog, Fox,  
Cat, Yak, etc.

## Functional Tests

Thermal Resistance  
Antistatic Test  
Air Permeability  
Breathability  
Antibacterial Test  
Fungus Test  
House Dust Mite Test  
WR, WP Test  
UPF  
Many more...





FITI's Root Cause Analysis team has accumulated half a century of experience with the mission of developing the quality of consumer products. A full range of state-of-the-art analysis equipment and the most experienced researchers are available to help solve product quality issues.

ANALYTICAL

Full range of Eco Tests, ROHS, REACH

Determination of Toxic Heavy Metals by ICP-OES, ICP-MS

Elements Analysis by XRF, AQF-IC(Halogene)

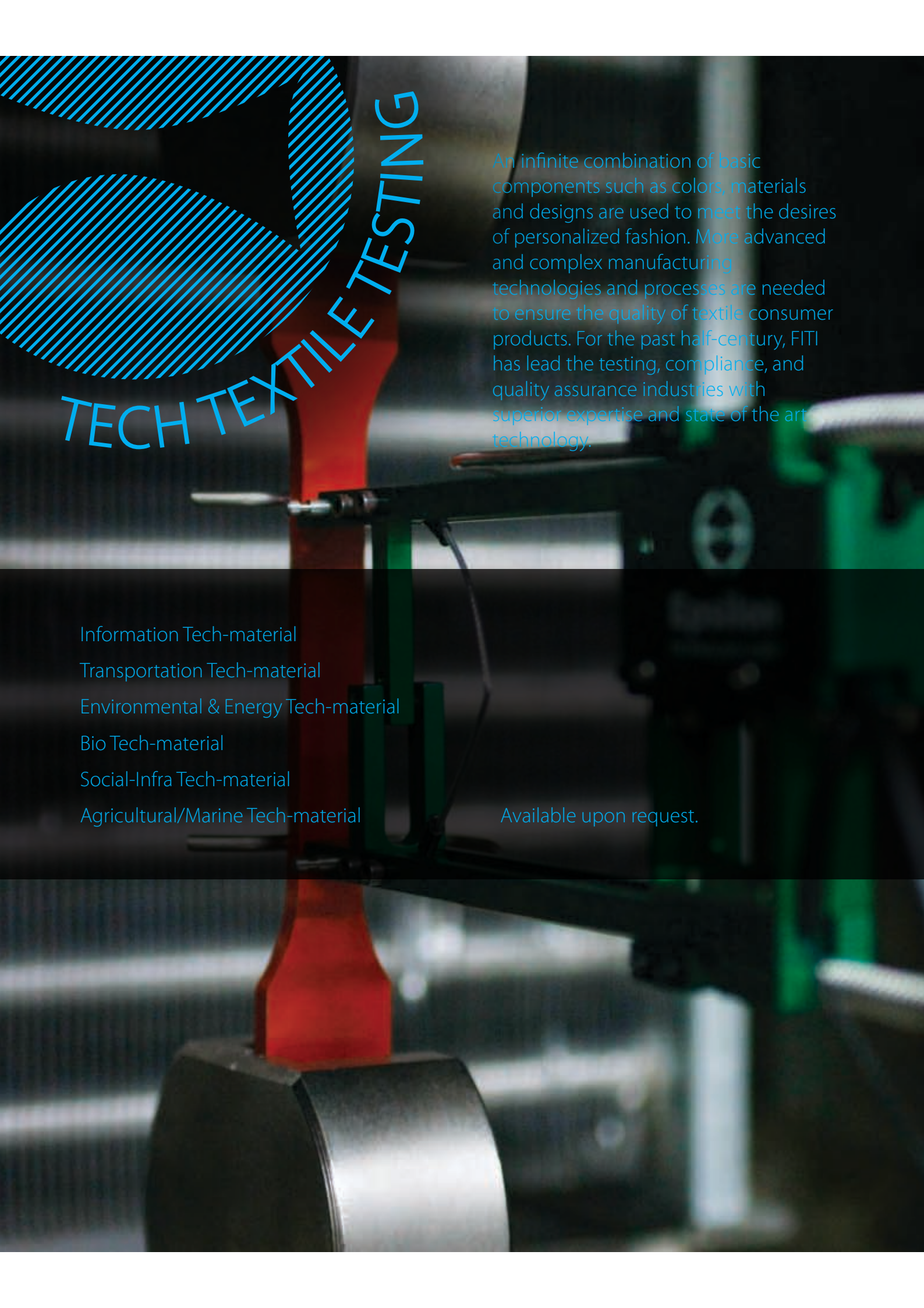
Determination of Azo-dye, Organotin compounds, PCP, PBBs, PBDEs, ODS, PCB, NP/OP , SSCP, Phthalate, VOCs by GC-MSD, Headspace/ATD-GC-MSD, GC-ECD

Disperse dyes, Carcinogenic dye, NPEO, Formaldehyde by LC-DAD, LC-MSD

Determination of Finess, Thickness of coating layer (electroplating)by SEM-EDS

Identification of Polymer by FT-IR Imaging system

Morphological analysis of surface by AFM



An infinite combination of basic components such as colors, materials and designs are used to meet the desires of personalized fashion. More advanced and complex manufacturing technologies and processes are needed to ensure the quality of textile consumer products. For the past half-century, FITI has lead the testing, compliance, and quality assurance industries with superior expertise and state of the art technology.

Information Tech-material

Transportation Tech-material

Environmental & Energy Tech-material

Bio Tech-material

Social-Infra Tech-material

Agricultural/Marine Tech-material

Available upon request.



FITI's advanced and full range of assessment capabilities helps the interests of all interested parties protected. To objectively assess the claimed products serves to protect the interests of manufactures who would have spent a lot of money in research and development and consumers alike. Functional characteristics in textile products can be categorized into four parts: Comfort, Convenience, Health, and Safety. Under each category there are groups of test parameters to assess distinctive functional characteristics, such as Hygroscopic Heat Generation, Deodorization Test, and Soil Repellency. At FITI, all this can be assessed as one stop service by highly talented and experienced technicians with the state of the art and full range of testing equipments. Below are our full capabilities of functional textile testing:

FUNCTIONAL TESTING

## LOYAL TO BASIC

Training  
Correlation Exercise  
Equipment Maintenance  
Control of Consumables  
Calibration Program

## ZERO QUALITY COMPROMISE

### Comfort

Water Vapor Resistance  
Water Vapor Transmission  
Drying Time  
Drying Rate  
Antistatic Test  
Triboelectricity  
Half-life  
Surface resistivity  
Water Resistance  
Thermal Resistance & Evaporative  
Resistance with Mannequin

### Hygroscopic Heat Generation

IR (Infrared) Thermal Test  
Coolness and Warmth by Touch  
Air Permeability  
Thermal Resistance

### Convenience

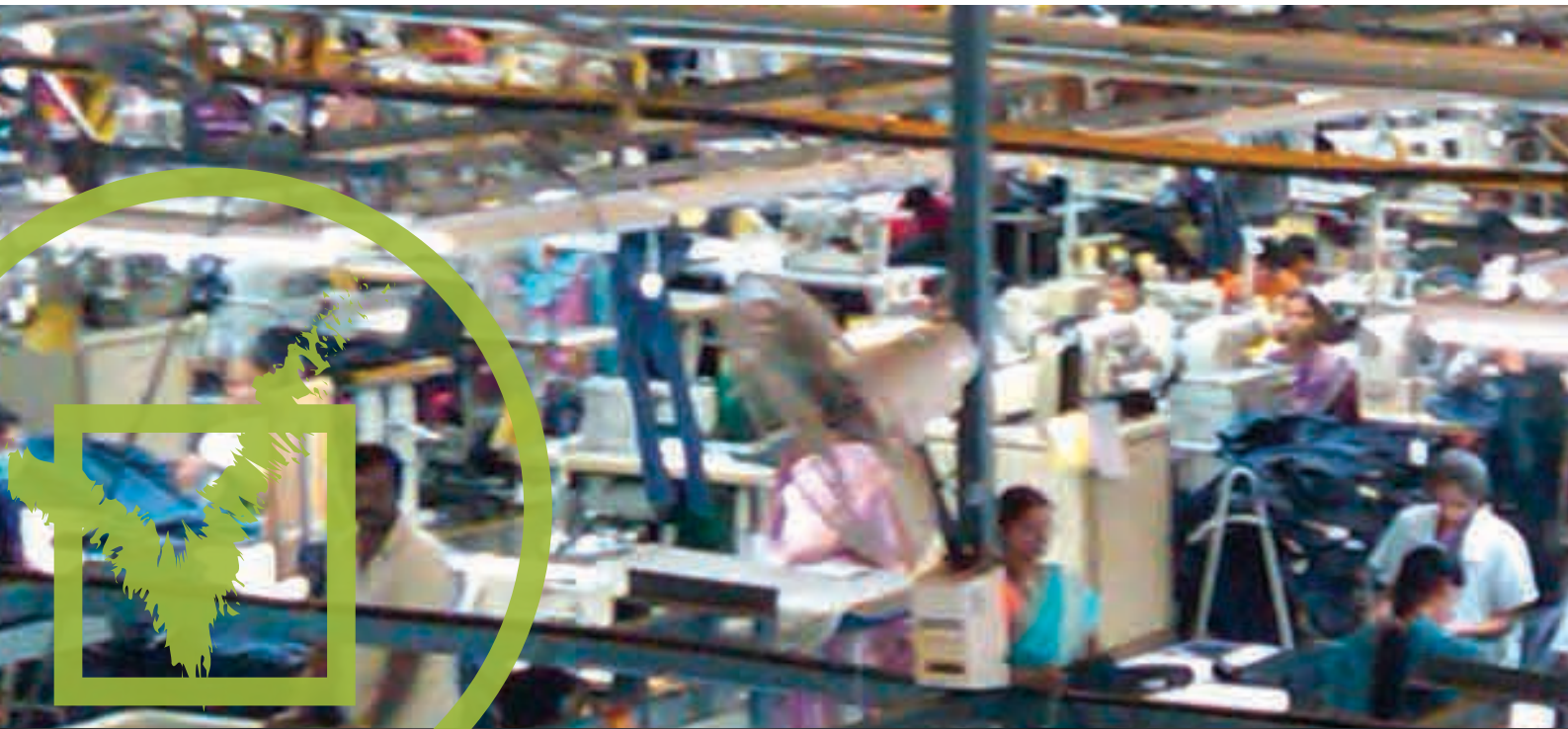
Wrinkle Free or Easy Care  
Soil Repellency  
**Water** Repellency  
Oil Repellency

### Health

Antistatic Test  
Antifungal Test  
Antimicrobial Test  
Insect Repellency  
Deodorization

### Safety

UV Transmission  
Flammability Test



# INSPECTION

Despite improvements in long distance communication, there is still no substitute for on-the-spot supervision of manufacturing. If your company is located thousands of miles away from your product source, you should ensure that your interests are well protected and that quality products are being manufactured. By using an independent inspection entity, problems will be identified and prevented at the source prior to shipment, and possibly during production. In your absence, FITI can monitor the entire Quality Assurance operation.

FITI has a strong worldwide reputation for providing independent third party testing & inspection services. Clients benefit because FITI oversees products on your behalf at all stages starting from the development, through the manufacturing process, to pre-shipment.

## Client Request Inspection

Requested by buyer for shipment

Requested by manufacturer for quality assurance

## Main Items to be Inspected

Yarn, Fabric, Garment, stuffed toy, leather goods, etc.

## Inspection Parameters

Appearance, Specification, Property, Color, Quantity, Package Condition, etc.

## Major Clients

Gap, Jones Apparel Group, Guess





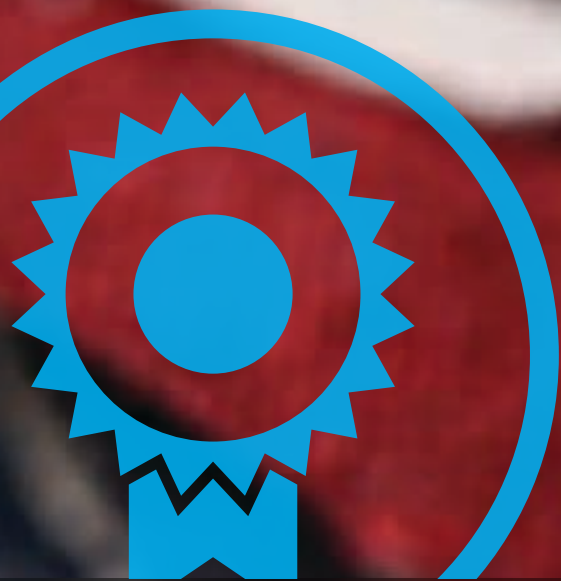
# AUDIT

FITI provides evaluation services through the Social Accountability Assessment Program (SAAP) in order to ensure that suppliers meet the social compliance standards set by clients. This evaluation service does not merely identify issues, but partners FITI with clients in order to find solutions for compliance issues and improve overall social responsibility.

More details are in the following "Social Accountability".

As a ISO 9000/14000 Quality System Consulting Institute, FITI assists all industries to improve their quality and environment management.

ISO 9000/14000 Certification Audit  
KOLAS (Korea Laboratory Accreditation Scheme) Audit  
KC Certification Audit  
'SF', 'Q' marks Certification Audit



# CERTIFICATION

When evaluating the quality of a product, if Testing and Checking are fragmentary (2 dimensional) approaches, then Certification is a fuller (3 dimensional) approach to ensure quality.

Typically, certification is only given to final products that are produced by production equipment and the adequacy of a product is assessed according to certain standards. The products are then retested and ensured of their suitability according to certain standards such as safety regulations or quality standards. To maintain the effectiveness of the certification, routine post management is performed. If issues come up during the post management process, the certification will be revoked unless the problem is corrected immediately.

When it is determined that the target item's frequency and degree of accidents are low, it is possible that the assessment of production equipment is omitted and only the authentication through testing is administered. FITI Testing & Research Institute is operating a variety of certification schemes regarding textile products and is constantly expanding to other industry sectors.



Sanitary Finish Mark



Quality Mark



Cashmere Mark

## Certification Procedure

Application ► Factory Evaluation ► Testing ► Certification Committee ► Periodic Evaluation





# REGULATORY



CPSIA



Korea Certification



China GB

In order to ensure product compliance, FITI provides regulatory compliance testing services according to the regulatory requirements of major countries such as CPSIA, REACH, California Proposition 65, GB and KC.

Due to the innate complexity of laws and regulations, the full or partial applicability of regulatory requirements may be ambiguous. We help our clients overcome this obstacle through our dedicated consulting services.

We also distribute our biweekly newsletter (FITI plus+) to our valued clients worldwide so that they can be aware of regulatory updates and take preventative measures before they are faced with compliance threats to their business.

A blurred background image showing a group of people in a meeting or collaborative work environment. The text is overlaid on this image.

# TECHNICAL SUPPORT & RELIABILITY ASSESSMENT

## Training & Seminar

Testing (AATCC / ASTM, ISO, BS, KS, GB)  
Regulatory update  
Buyer quality manual  
Industrial trend update  
Solution to failure

## Consultation

Failure Analysis  
Testing  
ISO 9000 Quality Management System  
ISO 14000 Environmental Management System  
ISO 17020/5 Testing and Inspection Quality Management system  
KC mark Certification

Our Publication is as follows:

Regular: Textile Journal, Testing Guides of the Functionality of Apparel Products  
Non-Regular: Textile data book, Testing guide, Textile testing method, investigative report

FITI Reliability Assessment Center is providing technical support to improve client's global competitiveness through 'Reliability Assessment', 'Service Lifetime Prediction', and 'Failure Analysis'.

Reliability Assessment Services include:

- Development of reliability testing method and Standardization & Development of accelerated life testing method & life-stress models
- Prediction of service life time and shelf life time
- Durability assessment to weathering and environmental stresses
- Reliability certification testing
- Design of testing facilities for accelerated life testing

# STANDARDIZATION



Writing/Revision  
of Global Standards



Response to  
Industry Standard



FITI In-House Test  
Method Development



ISO Secretary  
Organization



# ION

## Standardization Activities on Global Basis

Standardization Body	Standards	Proposed by FITI
AATCC	AATCC 107: Colorfastness to water	To revise the testing time to reduce for specimen immersion
	AATCC 81: pH of the Water Extract from Wet Processed Textiles	To add the testing condition which is in cold water specimen extraction
	AATCC 162: Colorfastness to Water : Chlorinated Pool	Consider testing condition to improve the reproducibility
	AATCC 20 : Fiber Analysis Qualitative - Identification for Metallic	To avoid confusion of identification for metallic yarn, ICP method is recommended
	AATCC 20 : Fiber Analysis Qualitative – Identification for PLA (poly lactic acid)	To develop the identification method of PLA
ASTM D13 Textile D35 Geosynthetic	ASTM D276 : Standard Test Methods for Identification of Fibers in Textiles – Revision for addition of identification for silica fiber	To develop the identification method of silica fiber
	ASTM D6918 - 03(2007) Standard Test Method for Testing Vertical Strip Drains in the Crimped Condition	New test method was added as method B (Revised ASTM D6918 is published and included the method B on Jan. 2010)
ISO/TC38 Textiles	ISO/CD 13029 Textiles – Determination for Drying rate of moisture management textile in dynamic state	New test method for determination for drying rate of MMT textile which is conducted by modified ‘Sweating Guarded Hot-plate’

# SOCIAL ACCOUNTABILITY

To help our customers take advantage of this challenge, FITI developed the Social Accountability Assessment Program (SAAP), which is designed for the continuous improvement of working conditions in facilities by auditing the global supply chain of retailers and brands.

SAAP consists of compliance audit tools and processes that evaluate current practices, providing interpretations of working and management requirements at the supplier level. SAAP is ultimately working to find and remedy root causes of noncompliance, focusing on suppliers' solutions and implementation.

Below are the major points addressed in this program:

- Factory Evaluations
- Child Labor
- Forced and Compulsory Labor
- Health and Safety
- Freedom of Association & Right to Collective Bargaining
- Discrimination
- Disciplinary Practices
- Working Hours
- Remuneration
- Management Systems

Through this program, all interested parties benefit as followed

Benefits To	Benefit Details
Retailers/Brand	Protect reputation More effective risk management Lower complexity and costs
Suppliers	Increased understanding of labor standards and other requirements Time and resources to reinvest in production quality Higher productivity from improved working environment
Workers	Increased awareness and understanding of rights Improved working conditions



# WHY FITI

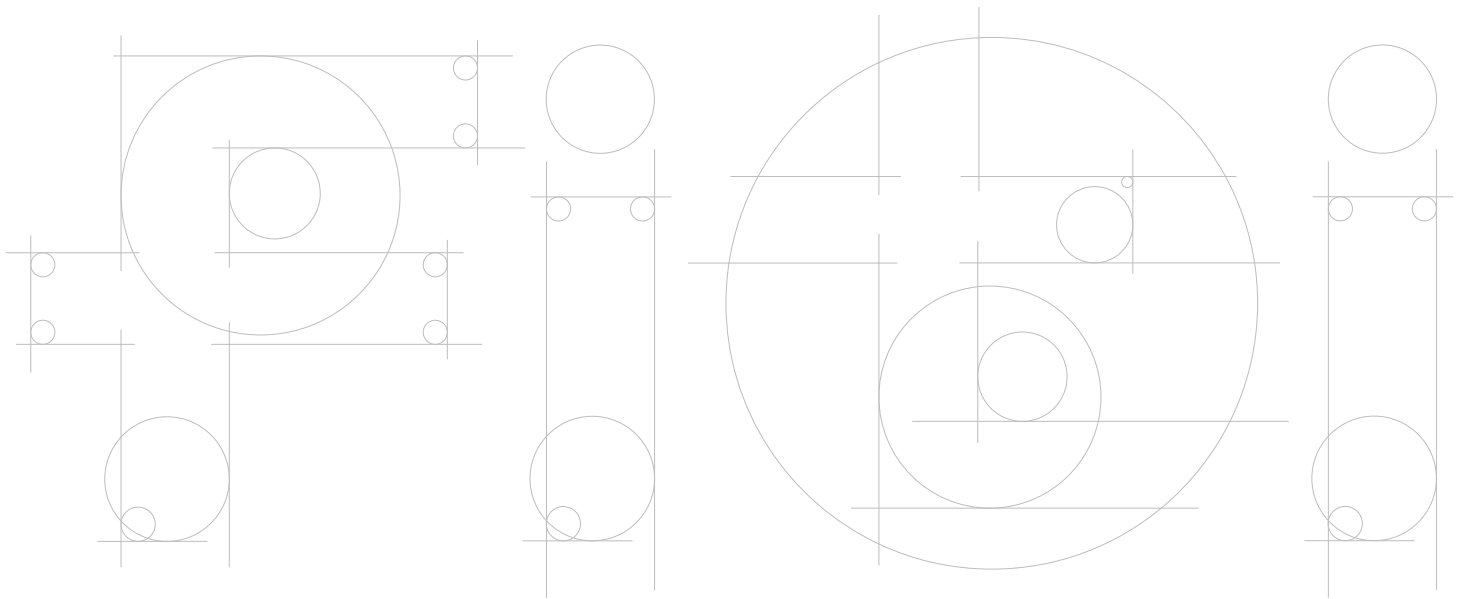
*Textile and apparel expertise for half a century*

*Only institute in the world to provide full range of testing, inspection, and certification services internally*

*Industry's fastest turnaround times.*

*Global Non-Profit catering to cost efficiency and savings*

*Dedicated engineers and one-of-a-kind state-of-the-art technology to satisfy your growing needs*



## FITI TESTING AND RESEARCH INSTITUTE INC.

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