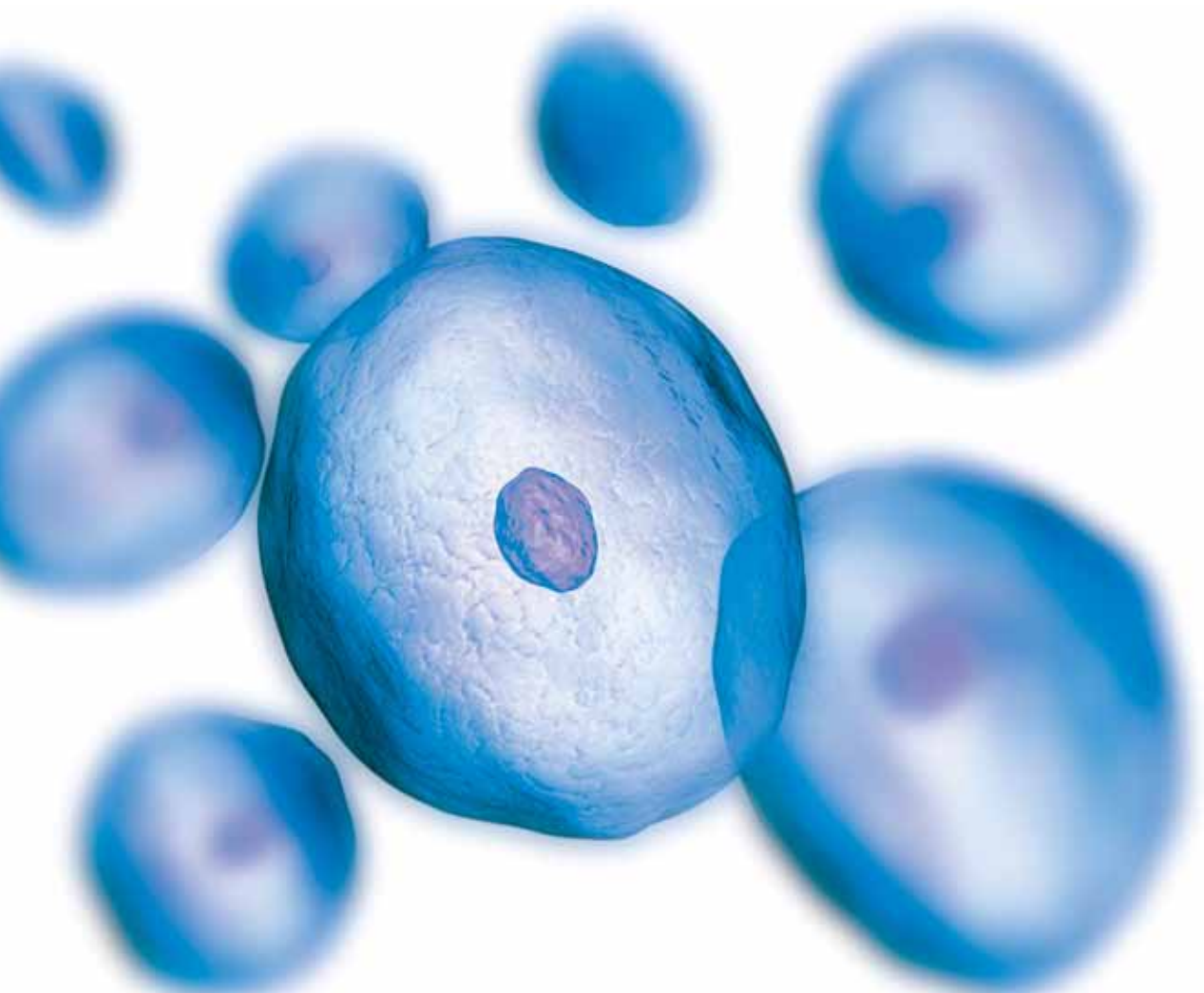
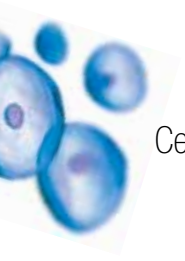


# Invitrogen Cell Systems

Cell Media Supply Certainty





Cell Culture

# A Culture of Quality

Nicolas Barthelemy, President, Cell Systems Division

## Welcome to this Manufacturing Resilience Overview for Invitrogen's Cell Systems Division.

This brochure has been created in response to your interest in the quality and dependability of our supply chain and manufacturing operations; to explain how we approach risk and strive to give you on-time, in-full deliveries of our trusted cell media without the worry and inconvenience that contamination, failure to supply, or late or incomplete delivery could cause.

More and more of our customers are taking risk mitigation seriously. While two might seem better than one for many applications, our customers are seeing for themselves how Invitrogen can provide a secure, single-source solution that does away with familiar problems like product inconsistency, USP/EP certification, AOF status, and testing that arise when you need to invoke your second-source arrangements. At Invitrogen we already have your second source on board through a well-engineered set of solutions, from dual-site media plants to an increasing number of product formats.

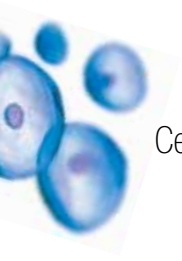
Let me share with you our commitment to risk mitigation at all levels, from raw material sourcing and stocking to finished-goods storage and distribution. We have developed and operate innovative programs to ensure the quality and reliability of our supply chain. More than that, quality, resilience, and a culture of responsibility and preparedness are part of the way we do business, pure and simple—it's now a part of our DNA.

In this brochure we set out our approach to risk and business continuity, and supplier and raw material risk, and we outline how measures like our analysis of stock and supply demand, our operation of dual cell media production methods, and our geographically disparate production facilities at Grand Island, NY, USA, and Inchinnan, near Glasgow, Scotland, all work together to make Invitrogen the supplier of choice for the risk-aware buyer.

Of course, this reflects a snapshot of where we are at present. We have ambitious plans to further integrate risk mitigation strategies in our operations, and when the time is right, we will share them with you. We do all this for one reason: to ensure that you, our valued customer, won't have to worry about it. We would like the choice of Invitrogen—the first time, every time—to be the easiest decision you have to make.

Cell Systems. Tangible quality.

Nicolas Barthelemy



# You depend, we deliver

## Risk-aware, risk-responsible

Invitrogen is a risk-aware and risk-responsible organization, from supplier and raw material sourcing—subjecting our suppliers to rigorous qualification and approval processes—to internal product development—striving to eliminate raw materials of inconsistent quality or specification from product formulation, at the design stage.

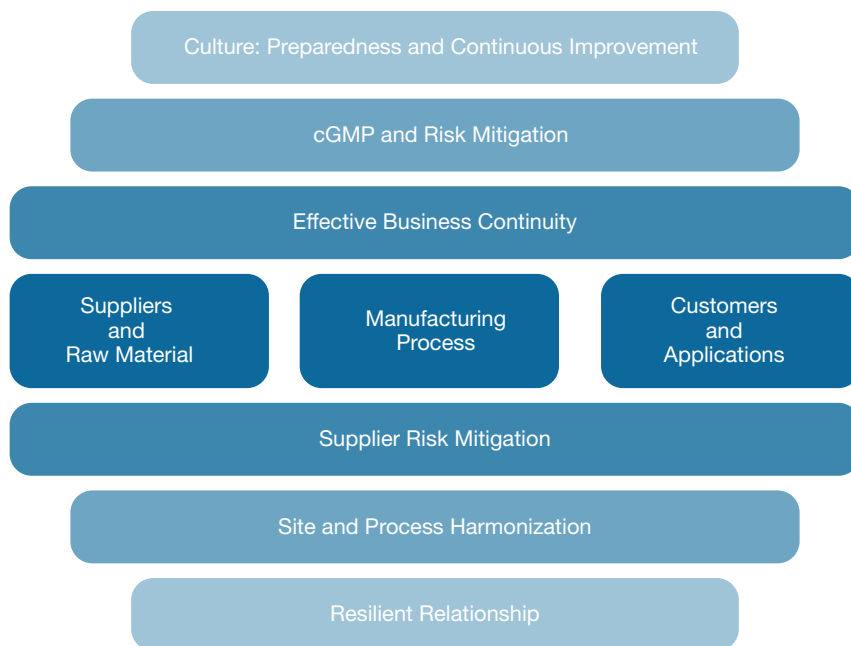
The model shown below illustrates the comprehensiveness of our risk mitigation policy and activity, and this brochure examines each of these key risk areas in more detail. Placing quality, and ultimately patient and end user safety and satisfaction, at the forefront is totally consistent with our track record of innovation.

Invitrogen’s leading position in cell media still sees us striving to find a better way every day. Take a look at the new GIBCO® bottle, designed with researchers in mind using anthropological

innovation techniques to ensure better performance and reliability and enhanced usability in the lab.

What might not be obvious when looking at the new GIBCO® bottle is the level of risk managed out of its production—for example, by using helium leak testing on our new bottle, we have engineered the design to minimize molecular leakage. Many of our competitors are satisfied to use much more crude microbial ingress submersion test methods, using a bug bath to ensure their bottle enclosures meet a minimum standard. We go the extra mile.

At Invitrogen, we endeavor to recognize and remove the risks from even the smallest facet of our operations. Why? Because it matters to you. For that reason, we have developed operational risk mitigation and control measures at every stage of our supply chain.



## Systematic supply risk mitigation

Your research and production schedules rely on a supply of dependable cell media. Our supply chain is just a part of your supply chain—a responsibility we take very seriously. Our whole culture engenders organizational preparedness, embracing continuous improvement principles from design and development through production.

Our production facilities are registered with FDA and MHRA, and are cGMP compliant. We are ISO 13485–certified, and are audited by our customers every week of the year—we’re always “audit-ready”.

We rehearse for the unexpected, and are committed advocates of effective Business Continuity as a strategy for keeping your supply line open. Our Supplier Risk Mitigation (SRM) program systematically reviews market conditions, supplier capabilities, quality standards, reliability, and supplier performance to define risk mitigation plans.

In Raw Materials, we operate risk-based sourcing and inventory strategies to manage risks; we commit a substantial investment to safety and consignment stocks to satisfy your need for certainty of supply.

We operate a Harmonization strategy, aligning equipment, formulations, work practices, and outputs from our cell media plants so you can be assured of product equivalence regardless of origin. This approach is consistently removing single points of failure and helping to guarantee product availability.

Finally, we are pursuing Resilient Relationships with customers—increasingly characterized by a mature dialog about risk management and how best to meet your needs. For example, one solution we’ve deployed extensively is our Supply Center model, where specific quantities and product mixes are held on your site to ensure product availability.

We complement and underpin these approaches with a range of best-practice techniques for risk recognition and reduction such as Failure Modes Effects Analysis (FMEA), where we plan, address, and redevelop processes, materials, or controls to drive risk out of the equation.

## Finding a better way

We value and operate a variety of Continuous Improvement programs; our commitment is evidenced by extensive Six Sigma investment and engagement, touching every level of the organization and integrated into the goals and objectives of every employee.

Our Chairman and Chief Executive Officer, Greg Lucier, visits a selection of Invitrogen sites each year to listen to what employees believe can be done better and what they have done about it.

Each year, Invitrogen employees demonstrate the impact that their initiatives have had on the business and on customers. We call it “Find a Better Way Day”, and it has become a firm fixture on the Invitrogen calendar.

For example, in 2008, projects included enhancements to our mitigation of supplier risks, a restructuring of our relationship with a key supplier to diminish supply risk, and a new program designed to deepen every employee’s commitment to tangible quality. The resulting program includes visits to customer locations, where our staff learn how our products are used, giving us all a better knowledge of our significance and responsibilities to end users.

Finding a better way has sponsorship from the top and is set to deliver further visible benefits to risk-aware customers in the years ahead.





# cGMP and risk mitigation: A dual-site, dual-process solution

## Resilient, not just compliant

Current Good Manufacturing Practice (cGMP) specifies the standard for our operations and environment. Our whole approach to design, new product development, and manufacturing considers the supply risks that we want to eliminate or control long before we even enter production.

When you buy Invitrogen media you are investing in products that benefit from a comprehensive and embedded approach to responsible risk management. This approach has resulted in diversification of our product base to include both liquid and dry powder cell media production methods—both of which we operate at volumes that can meet the requirements of research and bioproduction customers. Right now we are further developing production capabilities for Advanced Granulation Technology™ (AGT™) media and arrangements to protect production capability and capacity.

Every day we manufacture equivalent Invitrogen cell media products using dry and liquid methods both at Inchinnan, Scotland in the UK and at Grand Island, NY in the US. We leverage these redundant capabilities to facilitate a broader supply base for raw materials, storing and shipping materials between the sites as required. We source raw materials and intermediates from a number of Invitrogen sites in the Asia Pacific region, including New Zealand, especially where the material's risk profile indicates that additional sourcing options are required.

We operate a CAPA (Corrective Actions, Preventive Actions) process to systematically determine root causes of nonconformance and address them through appropriate risk mitigation measures. Similarly, the CAPA process applies to all our suppliers with whom we meet to review and implement the corrective and preventive actions we specify.

We know that to be able to source dependable, high-quality media from us is just part of the story; you also need certainty about product equivalence—not just in name, but in:

- Pharmacopeia grading
- Animal origin-free status
- Chemical composition
- Consistency of quality processes, regardless of origin and location of manufacture

In recent years, we have worked hard to meet these requirements and to try to guarantee availability through careful, risk-based analysis and a deep understanding of each link in our supply chain. Our customers know that we have done so without complacency and we are still investing to achieve even better results.

**STEVE FAASS, VP, GLOBAL OPERATIONS, CELL SYSTEMS DIVISION:**

*"...A KEY OBJECTIVE IS TO INCORPORATE EFFECTIVE RISK MITIGATION INTO EVERYTHING WE DO TODAY..."*

## Open book

This kind of quality is part of our commitment to every customer, regardless of their size or requirements. Our cGMP status is taken seriously as a fundamental prerequisite for many customers and helps to ensure that external or regulatory intervention is never a cause of non-supply.

So how “open-book” are we? A number of our customers now use our TrackWise system to give them a live window on our risk mitigation and CAPA processes applicable to their product and its manufacture. We are also sharing this information between our sites to ensure a consistent approach to common issues.

Come and see for yourself. We host a customer audit visit every week of the year and would be delighted to let you come and see how we are making risk management, mitigation, and resilience work for you. Putting the patient at the forefront of our consideration of risk is a clear and unambiguous guiding principle for Invitrogen: we don't consider any other approach acceptable.



### Making the grade: Quality standards that surpass the competition

As you expect, Invitrogen facilities involved in cell media manufacture comply with the following standards:

- ISO 13485 (2003)—Medical Devices
- FDA QSR 21 CFR part 820
- CE Mark—98/79/EC *In Vitro* Diagnostic Directive

We are not just meeting standards today—we are engineering the applicable levels of quality and compliance into our product design and formulation for years to come. Put our quality standards and supply chain excellence to the test in your process. Call your Account Manager to arrange a visit to an Invitrogen plant or to find out more.



# Continuous business: Effective business continuity planning

## A resilient operation

Ensuring the continuous business of all Invitrogen facilities is a high priority, and we are committed to the application of business continuity plans and principles throughout our operations.

We are firmly committed to a transparent relationship with our customers: our continuity plans legislate for unexpected interruptions at all of our production facilities and use other sites as necessary to compensate for unplanned outages. A global network of production facilities means we can and do call on other sites to handle production, distribution, or other aspects of Invitrogen overall workflow as necessary to ensure you continue to receive on-time, in-full deliveries, even in the aftermath of an incident affecting one of our sites.

When our Carlsbad headquarters near San Diego found itself in the path of the October 2007 wildfires, our commitment to customer service did not stop. Our Grand Island, New York, and Frederick, Maryland, plants provided assistance to ensure that vital customer orders continued to ship on time and in full. This is an approach we take worldwide, and while efficiency and productivity are important, they take a definite second place to patient safety, which we recognize can depend on our supply of goods to you.

We apply CAPA processes to the lessons learned from any operational issue, and systematically identify the sources of risk in our operations so that we can minimize the probability of the risks being realized. With highly specialized production equipment and environments, we examine our plant water, steam, power, fire suppression, stills, tanks, mills, and fillers continuously to minimize the risk of production outages due to equipment or utility failure. Our experiences during the October 2006 storm (see box opposite) provide a good case study.

## CYNTHIA MERTZ, DIRECTOR, FACILITIES AND ENGINEERING, CELL SYSTEMS DIVISION:

*"...ALTHOUGH WE CAN'T PREDICT EVERY EVENT, WE'VE DEVELOPED CONTINUITY PLANS THAT WOULD MINIMIZE THE DISRUPTION TO OUR CUSTOMERS..."*

Advanced capacity-planning models for each of our production lines allow us to anticipate growth while running scenarios to test supply capability and robustness. Redundancy is another strategy that we apply to our operations, exemplified by:

- Portable mills and fillers that can be transferred between sections of the plant
- Redundant bottle and filter suppliers
- Redundant cleaning systems, washing machines, pumps, filters, etc.

We want to be certain that redundant equipment can perform when needed and therefore spread production across production lines to ensure it is serviced, maintained, and calibrated in line with operational needs, not just in the event of an emergency. Our harmonization of equipment across our sites also means we can increasingly act as supply centers to one another, dispatching parts, raw materials, and even manufacturing skills in the form of highly experienced technicians between two sites.

Our Customer Service teams are supported by dual telecom assemblies in case of a network outage or other interruption, and we have teams in Grand Island (New York, USA), Carlsbad (California, USA), Burlington (Canada), and Inchinnan (Scotland) ready to take calls should one of our sites incur a more serious disruption.

Still, we don't stop there. We look at critical skills and know-how required to operate our processes and to manufacture your products, and as a consequence, introduce cross-trained technicians.

Having a flexible workforce that is cross-trained on multiple processes and operations allows us to shift resources in response to unexpected demand driven by customer needs. This highly

skilled workforce is backed up by sophisticated IT systems. These systems are designed to deliver relevant policy and procedures to precisely the point of use so our teams employ the best practices applicable to the process now and every time. We are committed to ensuring the resilience of our supply, services, and support.

## Effective continuity works

On October 13th, 2006, an unprecedented, localized lake-effect storm closed schools across western New York State and took out power to an estimated 300,000 residents and our Grand Island plant. New York Governor Pataki declared a Disaster Emergency in Erie and three neighboring counties. With 10–20 inches of snow falling overnight on Grand Island and the Buffalo area, trees still laden with leaves at that time of year snapped and brought down power lines throughout the region.

Our Business Continuity plans kicked in, with key maintenance, manufacturing, engineering, and quality personnel convening a predefined Business Continuity Team to determine the appropriate response. While a number of office-based staff worked from home, our customer service operations were supported by on-site generators. Interruption to the H-VAC systems ensuring clean room integrity required well-planned and well-timed triple-cleaning operations to be implemented in readiness for the recommencement of production. Maintenance crews were mobilized to ensure cleaning operations could be completed to allow production to recommence upon the restoration of power.

With customers dependent on Invitrogen products for a range of potentially life-saving or enhancing applications, we worked closely with the power company, provided free refreshments to those employees able to make the journey, and made the critical decisions required to ensure the integrity of finished goods and the manufacturing process. Meanwhile, production of key products was transferred from Grand Island to our Inchinnan, Scotland, plant. Finished goods

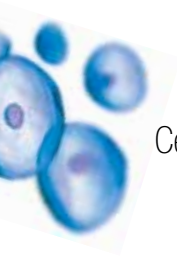
were shipped back to Grand Island, subjected to the same rigorous tests as locally produced product, and distributed to customers and other regions served by the Grand Island facility.

With the initial emergency having passed, the Grand Island plant was operational with power restored just eight hours after the outage, and we were open for business the following Monday morning. But the story doesn't end there: Invitrogen quality process requires the organization to study and learn from all interruptions. Working in partnership with the power company, we installed a dedicated power supply at the Grand Island site, ensuring that we are not in competition with homes and other businesses on the island for power. We also took the opportunity to beef up our generation capacity to ensure key parts of the plant can “plug and play” without interruption.



### October 2006 storm

- 300,000 residents without power
- New York State Thruway closed
- State Disaster Emergency declared
- State Emergency Management Plan invoked
- 100 plow trucks dispatched by Department of Transportation
- Invitrogen continuity plans rehearsed effectively



# Supplier risk mitigation: Protecting availability, protecting lives

- A deep knowledge of our suppliers
- At the forefront of supply risk mitigation
- Supply quality engineers on the ground throughout the world
- Constant analysis of supply risk:
  - Supplier Scorecards
  - Material Review Boards
  - FMEA techniques



## A holistic, risk-based approach

We protect your supply chain through an advanced program of risk mitigation. We take specific action to mitigate the risks of supply chain disruption for all raw materials, chemicals, and product packaging alike.

Our raw materials tend to be chemically defined and tested, and our animal-origin products (for example, fetal bovine serum) are produced at Invitrogen facilities, so we have a low risk of receiving adulterated or contaminated lots. However, this has not bred a complacent attitude. Given the level of product qualification required under EP or USP and for pharmaceutical products under MHRA or FDA regimes, we know how serious the impact of a nonconformance can be for your production processes and for patients and end customers who depend on your products for therapeutic or sustaining treatments.

The industry is now wide awake to the risks of raw materials of uncertain or unknown composition, and to the fact that counterfeit and even dangerous products can evade basic identification tests. We manage our supply base with a holistic approach that encompasses measurable aspects of our supply

experience incorporated into Supplier Scorecards that facilitate dynamic and real-time assessments of supplier and raw material risk.

We look beyond the distributor—we qualify the actual manufacturer of each material. We have a team of Supplier Quality Engineers who conduct demanding audits of our supplier base by visiting the plants and production sites—not by simply discussing operations at the head office. During the last 12 months we have conducted more than 40 full supplier audits, including eight in China alone, where a number of chemical manufacturing operations have relocated.

Despite high-profile adulteration issues stemming from China, we have developed long-standing and professional relationships with manufacturers that meet our rigorous quality standards, and employ a Sourcing Manager on the ground in China to allow direct contact and interaction with our trusted supply base and emerging providers as well as familiar names that are following an industry-wide movement eastward.

For all product formulations we endeavor to eliminate risk at the bench, before the product ever enters production. To do this, we engage with technicians and quality and procurement personnel to minimize or eliminate the use of problematic raw materials, supply intermediaries, and manufacturers who fail to meet our standards. We monitor weekly raw material consumption to determine our replenishment strategy using forecasting plus our current risk mitigation plan for the SKU, its supplier, and manufacturer.

Our Supplier Risk Mitigation program has delivered a systematic reduction in the risk scores we assign to suppliers and

materials. We are pursuing further reductions, targeting hard-to-get, single-source, and other materials that present a risk to supply and to your production and research.

**CATRIONA WILSON, SR. PROCUREMENT SPECIALIST, CELL SYSTEMS DIVISION:**

*"...WE ARE SYSTEMICALLY ASSESSING THE STABILITY AND CAPACITY OF OUR RAW MATERIAL SUPPLY BASE WITH A VIEW TO MANAGING AND REDUCING RISK..."*

### Supplier Qualification program

Our Supplier Qualification program is demanding and exacting. We conduct extensive research on any candidate supplier and subject them to a risk assessment and a program of testing specific to the specification and application for which the material is to be used.

We ask pertinent questions surrounding the centrality of our product to the supplier's strategy, the location and business continuity arrangements for each manufacturing site, the demographic of the supplier's existing customer base, and analysis of safety stock levels against current lead time. In fact, we assess materials against nine separate risk criteria, including single-sourcing and supply reliability. Every supplier must satisfy a comprehensive set of risk-based quality criteria.

Once a supplier is approved by Invitrogen, that is just the beginning. We hold monthly business meetings with suppliers, review performance, and determine the future of the relationship and our approach to stocking and other forms of risk mitigation based on the data gathered.

In other words, you can count on us to know our suppliers.

### Supplier Risk Mitigation program

Risk mitigation can take many forms, but our primary objective is clear: we are looking for product quality and certainty of supply above all else. To this end, we employ a range of strategies; safety stock levels are not determined by rule of thumb but by rigorous risk management processes.

Based on a wide-ranging risk assessment, we aim to retain a minimum of 3 months' average demand for each raw material SKU on site (unless the product is firmly considered a commodity item), and where the risk profile indicates a need to do more, we up our inventory or arrange for consignment or off-site stocks to be maintained.

At any time, 15–30% of our total on-site raw material inventory is safety stock. That represents a serious investment for Invitrogen and a real benefit for customers. We also have meetings of a Supplier Review Board, where measurable aspects of service plus intangibles are discussed. Unusual supplier behavior and industry rumors can be addressed on this agenda as necessary. Effective risk mitigation can also include partnering with suppliers to reengineer materials that present an inherent or supply-related risk.

To find out more about what we do to mitigate the supply risk for your raw materials, call your Invitrogen Account Manager.



# Harmonization: Bringing things together

## Preferred supplier, sole supplier

Harmonization is an Invitrogen process that allows our customers to use us as their sole supplier of cell media products. The wisdom of retaining dual- or multi-supplier sources of critical materials is well understood, but it doesn't necessarily make life easier for you, the customer. Often you cannot source a chemically identical product from your second source, so naturally you and your production team prefer one supplier.

When you need to invoke your second-source arrangements, you may need to halt production while you review pharmacopeia grades of their raw materials, understand what has changed in their formulation, and determine what issues you need to communicate to regulatory authorities.

Harmonization by Invitrogen means you can take advantage of a single source, have confidence in the continuity of your supply chain, and eliminate supply management overhead.

## Harmonized production and materials

Our twin sites and production processes deliver the kind of resilience demanded by leading biopharma and research institutions. Harmonization has seen alignment of our equipment procurement to deliver ever more similar setups at both plants. For some of our key cell media product lines, we can now say that both sites use identical machines to do identical jobs.

For example, the new GIBCO® bottle required new filling and finishing lines for use at both the Grand Island and Inchinnan plants. A single team investigated and sourced a solution to be deployed, serviced, calibrated, and maintained effectively at both locations. We recently introduced Fitzmills in our dry powder media plants and identical PDC, large-bag filling machines in our liquid media plants. We are endeavoring to ensure equivalence in all manufacturing operations, and can readily demonstrate equivalent

dispensing, formulation, milling, blending, filtration, filling, finishing, and storage capabilities to customers.

In addition, we work with individual customers to demonstrate product equivalence whenever requested (see box, opposite). This requires an in-depth understanding of international pharmacopeias, regulatory approvals, our global supply chain, and of course, our customer needs. We complete these assessments using a multi-disciplinary team comprising organic and analytical chemists, QC supervisors, sourcing representatives, and manufacturing personnel. While this is a lot of work, it affords us the flexibility to transfer production, raw materials, finished goods, and even personnel between our sites to maintain supply continuity. It also ensures that our products, including custom media specific to a single client, are consistent and reproducible (see box, right, for further information).

Through twin locations, manufacturing processes, and our Harmonization strategy, we are committed to a dual, redundant supply for cell media products both now and in the future, and our attitude is anything but complacent when it comes to protecting our production and our assets. Our Grand Island facility is rated a Highly Protected Risk by FM Global, the leading international loss prevention researcher and insurer, and we are pursuing the same accreditation for Inchinnan, having recently invested \$800,000 in new fire protection equipment. Several times a year we hold a summit between these sites to ensure a harmonized approach to risk mitigation and business continuity as we continue to add capacity, new technology, and process improvements.

As you might expect, a significant proportion of our IT systems are used in a nearly identical manner at the two sites. Our Production Control systems facilitate harmonized approaches to chemical dispensing, inventory tracking, machine calibration, capacity planning, and raw material testing. In those cases where we are not yet fully harmonized, we have a road map to bring the systems and business processes into alignment.

## Turning transparency into consistency

While we have assured the compliance of both sites with cGMP and ISO certifications, there are aspects of harmonization that require more investigation: water, raw materials, and equipment can all have a bearing on the end product, even when using identical formulations and techniques in the manufacturing process. We partner with customers and suppliers to find collaborative solutions to such complex issues. We review our supplier database, production methods, and equipment inventories, and engage our technicians and quality teams to determine, with the customer, the differences in:

- Raw material composition and origin
- ID, endotoxin, and bioburden tests
- EP and USP product grades
- Animal origin-free status
- Equipment and processes used
- Volume verification methods
- Equipment cleaning processes
- Certificates of Analysis

We explicitly lay out the differences—often very subtle—and follow this up by running trial batches and lots to determine which of your products can be sourced, with confidence, from Invitrogen alone. We are firmly on the side of our customers, who want to source dependably and responsibly; this investment of our time and resources is key evidence of our commitment to operational and product resilience and to our customers.

To learn more, speak to your Invitrogen Account Manager.



## Harmonized skills and quality

For Invitrogen, Harmonization does not stop with machines, parts, and plant. It goes right to the heart of employee training. We are expanding the scope of our training, which now encompasses key industry expectations, our own Quality Management Processes, and enhanced customer and product awareness, including:

- Gowning, cleaning, and disinfection processes
- Change control and handling deviations
- Corrective and preventive actions
- Overhauled work instructions and SOPs
- Our Quality System, now used to track compliance throughout the production process and to test employee understanding
- Customer expectations of Invitrogen, including what customers, their patients, and end users require
- Improved awareness of the applications for which our products are used, achieved by placing staff on site with customers to see for themselves how our approach to tangible quality impacts the customer and the patient

### GERRY MAYBACH, SR. MANAGER, FACILITIES AND ENGINEERING, CELL SYSTEMS DIVISION:

*"...OUR OPERATIONS TEAMS WORK GLOBALLY TO INSURE THAT OUR MANUFACTURING PROCESSES ARE HARMONIZED. THESE REVIEWS ARE ALSO A CRITICAL DESIGN REQUIREMENT FOR ALL NEW PROJECTS TO HELP MITIGATE RISK IN PRODUCTION..."*

## Our relationship: A mature approach to supply chain risk

### A dialogue and an understanding

It can be a surprise to discover your supplier is so acutely tuned in to the risk profile of your business. At Invitrogen, we are moving away from the transactional relationships of the past to a truly interactive engagement with our customers. In practice, that means sharing our concerns about risks openly and working jointly to secure solutions. This kind of dialogue takes commitment and resolve.

Our commitment to incorporating effective risk management into everything we do today is something we are delighted to talk about. During the last year we have provided speakers to a range of international conferences, where we have shared our approach to:

- Supply chain risk mitigation
- Sourcing from low-cost territories
- Maintaining our class-leading supplier qualification program

Our message is simple: We take risk mitigation seriously, so that you can order your media from us and pursue your production and research aims without fearing supply interruption. We prefer not to talk much about geography when it comes to raw material suppliers, but rather to consider every supplier and potential supplier through the lens of our comprehensive qualification program. Furthermore, if you have a specific concern or requirement, we would like to hear from you and consider how we can address it together.



**LINH HOANG, BUSINESS AREA MANAGER, CELL SYSTEMS DIVISION:**

*"...ON A REGULAR BASIS, WE HAVE DETAILED CONVERSATIONS WITH OUR INDIVIDUAL CUSTOMERS ABOUT MANAGING RISK, RAW MATERIAL SUPPLIER QUALITY, AND SUPPLY CHAIN EXCELLENCE. OUR CUSTOMER FOCUS ENABLES US TO TAILOR OUR APPROACH TO THE NEEDS OF THE CUSTOMER..."*

We believe this is one direction in which Invitrogen is taking a clear lead, and others will follow. Invitrogen enjoys seeing more of our customer relationships characterized by this kind of maturity—an ongoing dialogue about risk management, responsibility, supply and demand requirements, and flexibility. We think this approach represents an effective and productive way of working and significantly differentiates us from the one-size-fits-all approach of our competitors. It is also an approach that yields security of supply for our customers.

Supply agreements are an increasingly common feature of customer relationships, specifying exactly what you can expect and the level of risk mitigation we can offer. Such agreements include every aspect of your quality expectations—so if your application requires nanofiltration, irradiation, or viral clearance testing procedures, we're listening and we're prepared to take action. Indeed, we operate a range of pre-agreed testing and quality procedures in line with individual customer requirements—one size just doesn't fit all.

We see ourselves partnering with and adopting more strategic relationships with customers, because that is where you can derive benefits that let you leapfrog your competition and eliminate your supply risks.

We have been manufacturing the world's highest-quality and most dependable cell media since 1952, and we pass the benefit of our experience and expertise to customers every day.

## Supply Center by Invitrogen

Our Supply Center concept has been introduced as a direct result of productive dialogues between Invitrogen and our customers. For customers seeking to maximize the productivity of their research operations and to minimize their stock-holding, we now provide a reorder and replenishment solution with customer-specific product holding, delivery scheduling, and invoicing.

Supply Centers allow customers to hold stocks on their own premises in Invitrogen freezers and/or refrigerators and to be invoiced only at the point of use, with all stocks provided free of charge on a consignment basis. Consumption is measured using a simple web-based tool that was developed in collaboration with customers and is readily integrated into existing procurement and ERP solutions.

We have already implemented Supply Centers as an enhanced service at over 250 customer sites in Europe and over 500 in the US.

To learn more about Supply Centers or any of our other innovative approaches to stocking, supply, or any aspect of meeting a customer's needs, contact your Invitrogen account representative or visit [www.invitrogen.com](http://www.invitrogen.com).

**SupplyCenter**  
by  **invitrogen™**

Since 1962, **GIBCO**® has been the consistent provider of high-quality media, reagents, and sera for reliable cell culture. A commitment to unsurpassed product performance has earned GIBCO® a place at the forefront of companies supporting global life science research, bringing the cell culture community greater confidence in their results.



[www.invitrogen.com](http://www.invitrogen.com)